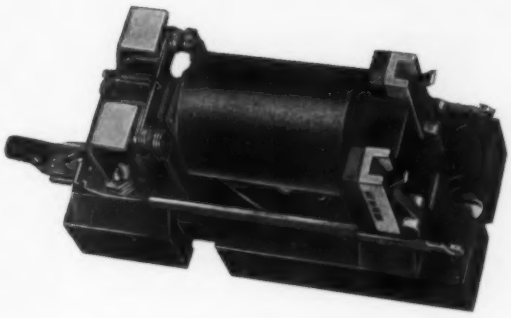
FAHNESTOCK
ELECTRIC COMPANY, INC.

Type 3-A
Arrester Relay



SOLD BY
WESTERN RAILROAD
SUPPLY COMPANY
2360 SOUTH ASHLAND AVENUE
CHICAGO 8, ILLINOIS

● The No. 3-A Arrester Relay will be found invaluable where communication circuits are subject to frequent and heavy induction from power circuits. Their efficiency under such conditions is attested to by their use for many years by the railroads and by telephone and telegraph companies. This relay will pull up within a cycle on currents of 1-½ amperes or more and will release when the current reduces to 0.4 ampere.

TELEPHONY

The Journal of the Telephone Industry

JANUARY 12, 1946

IN THIS ISSUE

NATIONWIDE OPERATOR TOLL DIALING 13

THE PLANT MAN'S NOTEBOOK 17
By Ray Blain

IN THE NATION'S CAPITAL 18
By Francis X. Welch

THE OPERATOR'S CORNER 25
By Mayme Workman

COURTS AND COMMISSIONS 26

COMING CONVENTIONS 26

NORTHEASTERN IOWA GROUP HOLDS ANNUAL MEETING 31

H. D. FARGO, JR.
President and Advertising Manager

R. C. RENO
Vice-President and Editor

A. J. STULTS
Secretary and Western Manager

H. D. FARGO
Vice-President and Treasurer

JOHN G. REYNOLDS
Associate Editor

RAY BLAIN
Technical Editor

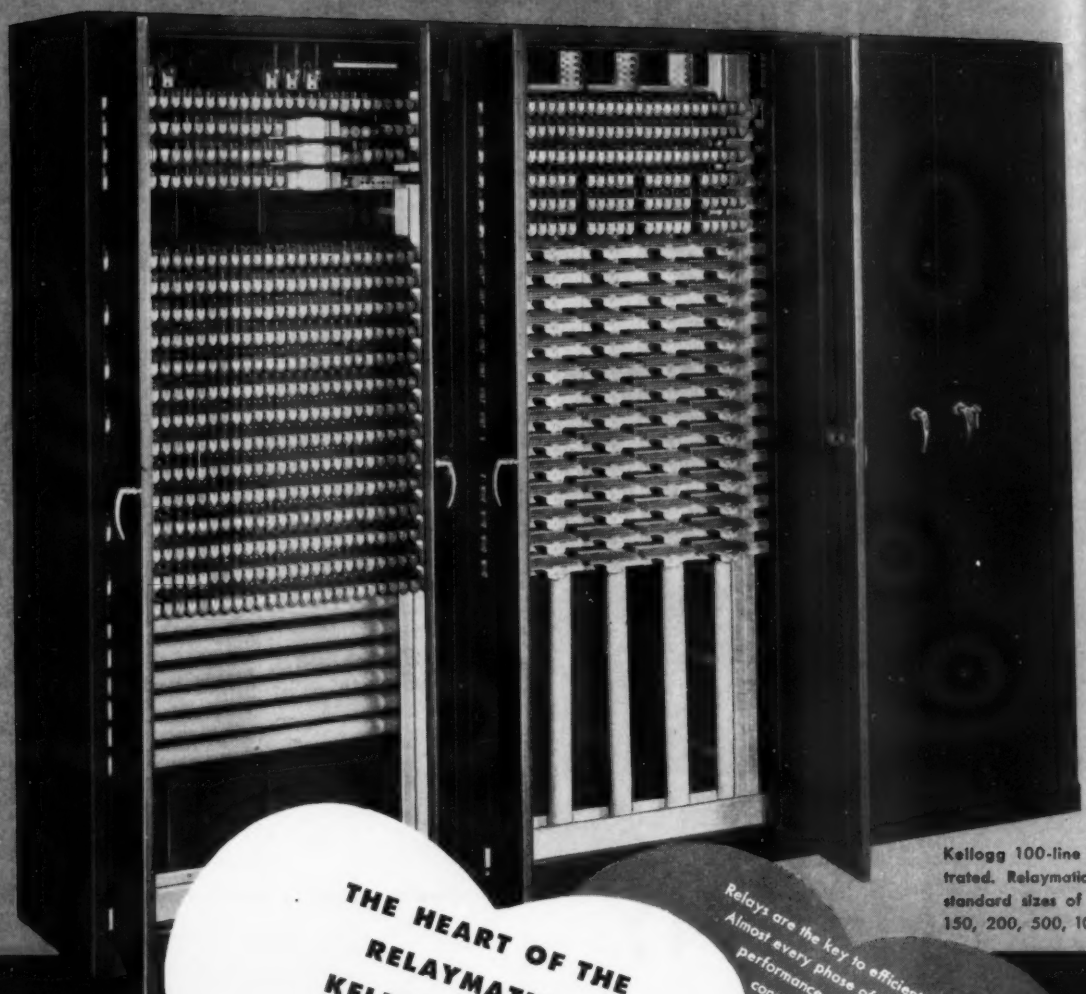
FRANCIS X. WELCH
Washington Editor

CLAIRE LE BRINT
News Editor

MAYME WORKMAN
Traffic Editor

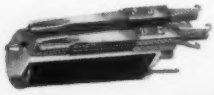
Published by
TELEPHONY PUBLISHING CORP.
608 S. Dearborn St., CHICAGO (5), ILL.
Telephone Wabash 2435

SUBSCRIPTION—15 Cents a Copy (except special issues); $3 a Year U. S. and Countries in U. S. Spanish Postal Zone; $4 Canada; $5 Other Countries.



Kellogg 100-line Relaymatic illustrated. Relaymatics are available in standard sizes of 10, 30, 50, 100, 150, 200, 500, 1000 lines and up

THE HEART OF THE RELAYMATIC— KELLOGG RELAYS



Relays are the key to efficient dial switchboards. Almost every phase of operation depends on their performance. They must be right . . . ruggedly constructed to assure positive operation over extreme temperature variations. That's why Kellogg uses precious metal on all relay contacts . . . twin contacts on special nickel silver springs . . . special Bakelite insulation. There are 48 years of relay "know-how" behind the Relaymatic, plus the resources and reputation of one of the oldest, largest and most reliable telephone manufacturers. These are some of the good, sound reasons for choosing this dependable, fine-performing switchboard.

KELLOGG *Simplified* RELAYMATIC

THE DIAL SWITCHING UNIT BUILT FOR LASTING SATISFACTION

Nationwide Operator Toll Dialing

FOREWORD

The Independent telephone industry is interested in the new nationwide operator toll dialing plan and wants to know more about it. In particular it wants to know what implications, if any, this plan may have for an individual company. It may be some time before answers to all conceivable questions on this subject can be furnished but in the meantime some interesting and useful information is available.

Nationwide operator toll dialing contemplates a combination of scientific development and new operating technique by which improved toll service can be rendered more economically than with facilities and practices generally prevailing at the present time. When the new plan is established substantially, toll calls from one end of the country to the other will be completed under the control of the operator's dial or key sender equipment, in many cases without the assistance of a second operator. The service improvement to the telephone customer through the reduction in time required to complete a toll call by this method is quite apparent.

Because the new plan for handling long distance calls will operate on a nationwide basis, the complete coordination of toll practices and facilities of all participating companies, Bell and Independent alike, must be attained. The design features of the nationwide operator toll dialing plan, however, contemplate continued operation on a ringdown basis in those cases where conditions do not warrant conversion. It will be practicable, therefore, for each Independent company to decide for individual locations whether or not the toll dialing features are sufficiently attractive to make it desirable to provide the necessary equipment.

The American Telephone & Telegraph Co. has made available for publication, through the Dial Interexchange Committee of the United States Independent Telephone Association, memoranda (dated August 13, 1945) pertaining to the nationwide operator toll dialing plan. These memoranda will be released as a series of five articles. The article beginning with this issue provides a general description of the plan. Subsequent articles will give the operational features.

F. E. NORRIS, Chairman
USITA Dial Interexchange Committee

* * * *

OPERATOR toll dialing has been in use for sometime in a number of rather small networks in various parts of the country. Within several years after the end of the war, methods will be available to inaugurate a nationwide operator toll dialing plan which will enable long distance operators to dial calls, directly and unassisted, straight through to the called telephone even though it be at the other end of the continent. In order to realize the full advantages of this plan, it is essential that provision be made for the inclusion of Independent telephone offices, where desired by the Independent companies, as well as Bell offices. In addition to Independent telephone companies in this country, the plan will be designed to be broad enough to include telephone companies in Canada to the extent they wish to be included in the plan.

Among the many factors involved in this project, there are three outstanding ones:

(1) Development of a national numbering plan which may be used universally by all outward long distance operators to complete a call to a telephone reached through any central office connected with the nation's toll network.

(2) A new arrangement of toll dial switching equipment which functions in response to the operator's dial and has capacity for performing many operations economically.

(3) Modification of the present General Toll Switching Plan — the basic routing plan for toll calls — to provide for handling nationwide dialed traffic. This consists essentially of determining the points at which would be located the new toll switching equipment mentioned above. There is expected to be less than 150 such cities and they will be designated "control switching points."

Operator toll dialing offers impressive opportunities for further improvement in the speed of long distance connections, in the accuracy and reliability of service and in over-all economies of operation. The Bell System plans to make very general use of this operating method as soon as materials and manpower are available. The complete conversion of the inward and through boards to dial operation is anticipated within the next 10 or 15 years. However, the design features contemplated for Bell System toll offices provide for continuing operation on a ringdown basis in those cases where conditions do not warrant conversion. It will be entirely practicable, therefore, for each Independent company to decide for individual locations whether or not the toll dialing features are sufficiently attractive to make it desirable to provide the necessary equipment. However, the advantages of the toll dialing plan can be realized more fully as greater numbers of offices throughout the country are equipped to participate in the plan.

In general, the preferable time to introduce toll dialing is at the time when conversion is being made from manual to dial equipment for the local equipment. This usually involves a new toll board, the cost of which is minimized with toll dialing because this will reduce the amount of switchboard equipment required.

Present Toll Dialing

Operator toll dialing has been used in limited areas for some years in both Bell and Independent networks, some of the earliest installations on record occurring on toll circuits between various Independent exchanges in Ohio. At the present time, more than 130,000 calls a day, or 5 per cent of the daily 2,700,000 toll board calls over Bell System lines now are being handled by this method.

Briefly, under this method the customer dials the usual code to reach the outward toll operator, who, in turn, completes the call through toll dial equipment without the assistance — in most cases—of another operator. With this method, on a station-to-station call, the toll operator, after dialing the necessary codes and the called number, can cut out of that connection and proceed with other calls, since she will receive a signal when the called telephone answers or a flashing signal if the called subscriber's line is busy. If the circuits are busy, she will receive a distinctive signal, and when a circuit becomes available, another signal will tell her to

dial again. Provision is made for the operator to reach toll inward, information and other operators if their assistance is necessary in the completion of a call.

Although this type of dialing now is in use in isolated networks in various parts of the country, certain developments and changes in methods and facilities are necessary to interconnect these networks and expand them into a nationwide system.

NEW DEVELOPMENTS NECESSARY FOR NATIONAL TOLL DIALING

Present Step-by-Step Toll Dialing

Many hundreds of communities, small and moderately large, have for years been furnished local telephone service through step-by-step dial central offices. Gradually the reach of the dial mechanism has been extended out to neighboring towns and cities—even to those at some distance—and today operators are dialing toll calls over step-by-step toll dialing networks over fairly wide areas in Connecticut, Ohio, Michigan and other places.

In brief, the operator, after receiving from the customer the number he wants in another place, takes up a circuit to the called place and dials the called number, or, in the case of a switched call, first dials a code to secure a circuit to the point beyond and then dials the called number.

For example, on a call from Middletown to Columbus, Ohio (See *Fig. 1*), the operator at Middletown plugs into a toll circuit to Columbus in her multiple and dials the Columbus telephone number as listed in the directory. If the call is to Akron, the Middletown operator likewise plugs in a circuit to Columbus, but dials a code which causes the switches at Columbus to connect her with a circuit to Akron and then dials the listed number at Akron. If she were authorized to dial through to Youngstown, she would reach Akron as on an Akron call but would then dial an additional code to reach Youngstown and then the Youngstown listed number. Many similar examples of this method are common in networks throughout the Independent field.

Obviously the method now employed in these isolated networks could be applied to the routing of a toll call through any desired number of switching points, transmission permitting. Note, however, that under this method each switching point would involve the dialing of additional digits by the operator. On a toll call involving three switching points, as many as 16 digits might have to be dialed.

Moreover, under the method of operation now used in limited areas, the operator must know the exact route and must know, before she starts to dial, the codes necessary to get through each of the switching points involved. Also, if the circuits at any point along the line are busy and an alternate route is available, she must dial a new set of codes to use that route.

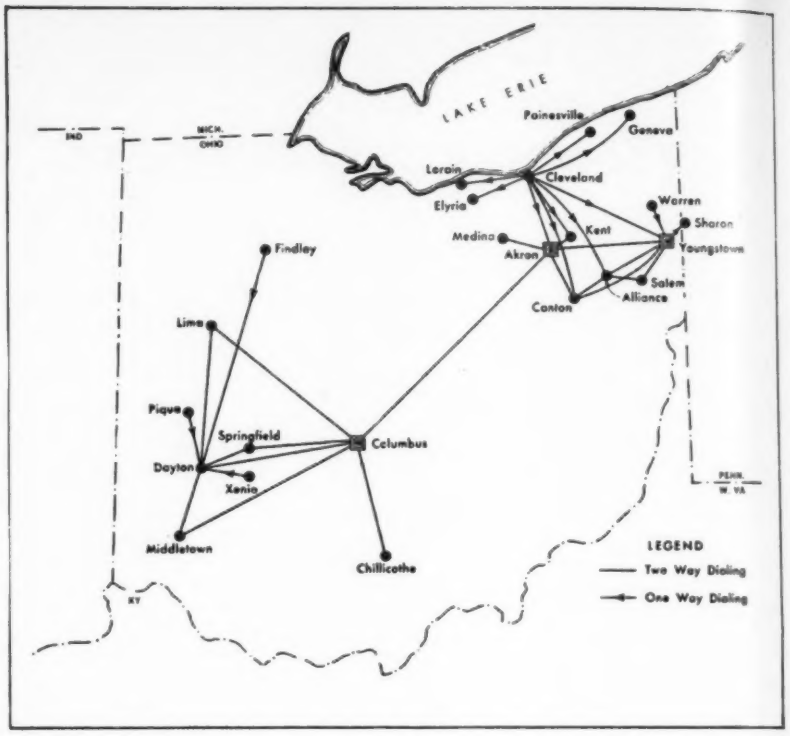


Fig. 1

To avoid these difficulties in a nationwide toll dialing system in which definite codes are established for the destination points, it is necessary to provide facilities whereby the code dialed by the originating operator is translated to the extent necessary to route the call through all of the intermediate switching points. Also facilities must be provided for the automatic selection of alternate routes to avoid any call being blocked at any point along the preferred route by an "all trunks busy" condition.

It is proposed in the Bell System to provide these common control switching arrangements with crossbar toll switching equipment. Other types of dial equipment may be used where common control switching arrangements are required so long as provision is made for coordinated operation with other equipment in the nationwide toll dialing system.

EDITOR'S NOTE: *With reference to this and the three preceding paragraphs, it is understood that step-by-step automatic equipment, which is widely used by Independent companies, may be arranged on a "Director" basis to provide digit translation, alternate trunk routing and the various other features provided by crossbar equipment, to meet the requirements of a nationwide toll dialing system in which definite codes are established for the destination points.*

Characteristics Required of Control Switching Equipment

For satisfactory nationwide operator toll dialing, it obviously is necessary to have the equipment determine the routing at the important switching centers designated "control switching points." On this basis, a code is assigned which represents the destination of a call, the dial equipment selects the route, operates switches at intermediate points, tries alternative routes if necessary and completes the call.

For the larger places, the No. 4 toll switching system, already in service in Philadelphia, will, with slight modifications, be adequate. This system permits calls originating in surrounding step-by-step networks to be dialed into the Philadelphia panel and crossbar dial offices or routed from one step-by-step network through Philadelphia to other step-by-step networks.

This new system utilizes crossbar switching equipment and is of the common control type, providing a high degree of flexibility and speed in the handling of calls. The common control

equipment enables the called number to be registered in storing circuits, called senders, after which it is analyzed, or "translated"; and then, depending on the destination of the call and the type of switching equipment which will be called upon to complete it, a choice of routing and pulsing automatically is determined, a circuit to the called point is selected and the signals which will locate the called number are forwarded to the destination. At this stage the common control equipment is released and becomes available for handling other calls leaving the call connected through the crossbar switches with release under control of the originating operator. The equipment functions as an outward toll tandem board, an inward toll board and a through switching toll board, but does not replace outward positions of the present type.

For busy periods when toll lines are congested, operators are located at a group of delayed-call positions and these operators can complete the calls in the order of filing as circuits become available.

Important transmission improvements and economies are obtained by the use of four-wire switching through the equipment and the automatic switching-in of repeaters whenever they are required.

The No. 4 equipment can receive the called number in terms of dial pulses or of pulses from operators' key sets. For inward ringdown or straightforward calls it provides positions of the call-distributing type without cords or multiple at which the operators key up the desired number, thus recording it in the sender and permitting the completion of such calls as if they had been dialed by the originating outward operator. Completion of calls through any kind of dial equipment or to manual offices is provided.

Experience with the Philadelphia installation demonstrates that this type of equipment, with appropriate modifications, can be used in a nationwide operator toll dialing system.

While the present No. 4 system includes most of the features required for nationwide operation, additional features also are being incorporated to make provision for automatically selecting the most direct route to a distant city.

Transmission of Signals

The long distance transmission and reception of signals or pulses will be an important factor in selecting toll circuits, establishing connections and, finally, in giving the outward operator supervision of both ends of the connection. Arrangements also must be made for the disconnection of circuits at through switching points under the control of the outward operator.

These signals must follow the general route of the call, but need not be transmitted in all cases over the same circuits on which the conversation takes place. In some cases, direct current circuits will be used between cities, but for the longer distances it is expected the signals will be sent over the regular voice frequency or carrier talking circuits.

In any event, the technique of long distance transmission of telephone and telegraph currents which has been developed so extensively in this country will play a most important part in the extension of toll dialing on a nationwide basis.

Universal Numbering Plan

Development of nationwide operator toll dialing requires, as a concurrent step, development also of a nationwide numbering plan and a simple scheme of destination codes to permit reaching any toll center in the long distance network and thus any central office and any telephone. Through this plan, the same code can be universally used by all outward operators for reaching any particular office, and this one code is transmitted forward by the equipment and reused at all intermediate switching points. (Shorter-haul toll calls will continue to be completed without the use of the national toll codes.)

To set up this universal numbering plan, the country is being divided into from 60 to 75 numbering-plan areas. Each of these will be designated by a distinctive three-digit area code. Each office within an area will be designated by a three-digit office code, not conflicting with the code of any other office within the area nor with any area code. Thus each office in the country will be assigned its own distinctive six-digit code made up of a three-digit area code and a three-digit office code.

Any toll call can be completed by dialing a maximum of 10 digits; the six digits of the area and office code and the four digits of the called telephone number. On calls between points in the same numbering plan area, the area code will not be required and only seven digits need be dialed. Area codes will contain the digit "1" or "0" in the first or second place, while office codes will never have these digits in the first or second place. This enables the equipment to recognize from the first two digits dialed whether a 10-digit inter-area or a seven-digit intra-area call is being made.

The accompanying map *(Fig. 2)* illustrates how such a nationwide numbering plan might look. It will be noted that the boundaries of the numbering plan areas generally follow state lines. To the extent that it is feasible, an entire state will be included in one numbering plan area, so that the operator can readily associate the numbering plan code with the state name. Examples of this might be the states of Washington, Maine, Connecticut and New Jersey.

The larger states, such as New York, Illinois, Texas and California, will be divided into two or more numbering plan areas each; and in some cases such as North and South Carolina, it will be possible to combine two states in the same numbering plan area.

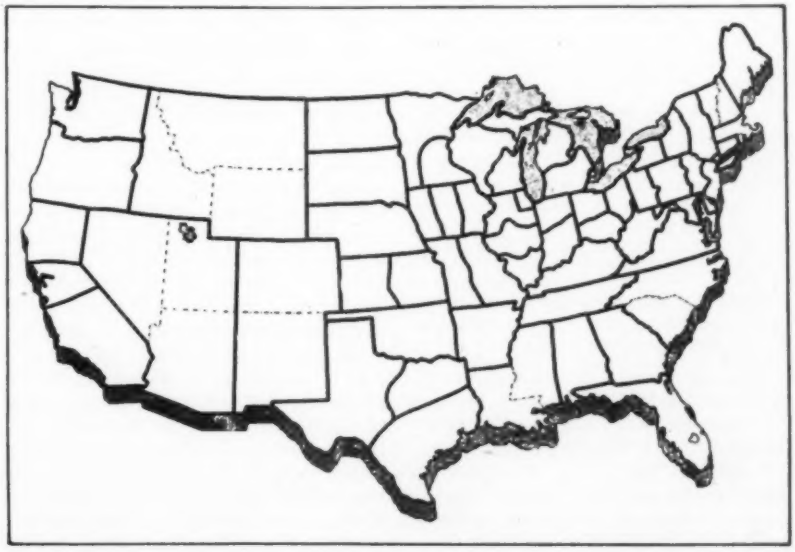


Fig. 2

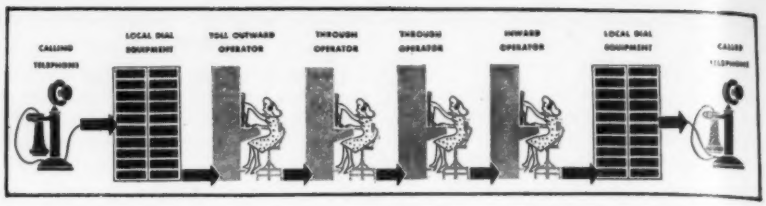
No change of customers' telephone numbers or local dialing practice is necessary. For the three-digit office codes which designate the offices within a numbering plan area, and which will be non-conflicting, the first two letters of the community or office name plus a numeral generally will be used. These codes are for the use of toll operators only. For the seven-digit cities with two-letter, five-numeral numbering plans for customer use, operators will use the same office codes as customers. It is anticipated that all seven-digit cities will be on this basis by the time the new routing system is widely adopted.

For six and five-digit cities, the code for the use of toll operators will be the existing office code with one or two added digits. For four-digit offices, the code will be three added digits.

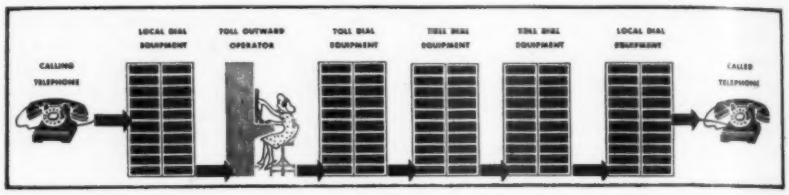
On many calls, the entire code dialed by the operator can be derived from the information furnished by the calling customer with reference only to very simple code information on the bulletin at the operator's position. For example, on a call from Fargo, N. D., to Newark, N. J., Market 2-2100, the Fargo operator would determine from her bulletin that the New Jersey code is 312 and would dial 312 followed by the listed number MA2-2100. On a call to Newark from Camden, N. J., both of which are within the same numbering-plan area, the area code would not be required and the operator would simply dial the listed number MA2-2100.

There are numerous cities located near state boundaries which have close community of interest with places just over the boundary. Well-known examples of this are Philadelphia-Camden, N. J.; Detroit-Windsor, Ontario; and Washington-Alexandria, Va. Wherever possible the area around such cities will be included in the numbering plan area of both the adjacent states. Central office code conflicts in the adjacent cities will be eliminated and this, together with their inclusion in both numbering plan areas, will make it possible, in such cases, for operators to dial across the state boundaries without the use of numbering plan area codes. With such an arrangement an operator in Philadelphia may dial a number in Camden using only seven digits, but would have to dial 10 digits to reach a Newark number.

The numbering plan arrangements contemplated are designed to include all Independent exchanges in the establishment of the numbering plan areas. All offices in the country should be included in the numbering plans, whether they are manual or dial, to provide operators with a code for calls to those offices. Cooperative work will be necessary among the companies involved in order that proper codes may be assigned to each exchange.



Diagrammatic representation of manual toll operation. The operators in different cities are linked together by toll circuits.



Diagrammatic representation of operator toll dialing. The equipment in different cities is linked together by toll circuits.

RELATION TO GENERAL TOLL SWITCHING PLAN

The General Toll Switching Plan has an important part in the development of nationwide toll dialing. This plan provides the basic routing arrangements, under existing methods of operation, for all calls which require one switch or more at intermediate points. It set up eight regional centers, at New York, Atlanta, Chicago, St. Louis, Dallas, Denver, Los Angeles and San Francisco—all of which are directly interconnected. To these regional centers are connected some 140 primary outlets throughout the country, and to these in turn are connected all the rest of the toll centers—some 2,400. This makes it possible to complete a call from a toll center at one end of the country to a toll center at the other end with a maximum of four switches. Such a call would be routed from originating toll center over the direct circuit to its primary outlet, switched to its regional center, switched to the distant regional center, switched there to a primary outlet and finally switched at that point to the terminating toll center. Fewer switches than this would be required in practically all cases because the economical design of the toll plant has resulted in the establishment of direct circuits between many points at great distances from each other. A great number of toll centers are connected directly to more than one primary outlet and many toll centers have direct circuits to one or more regional centers. Though not essential to the plan, these circuits provide more direct routes not requiring so many intermediate switches. For transmission reasons, the plan requires that gain is provided at all primary outlets and regional centers.

The General Toll Switching Plan forms a firm foundation on which to build the extension of toll dialing. Using this plan, with the major switching points already established for manual operation, it appears practicable to locate crossbar switching systems, providing the features necessary for "control switching points," at important switching centers including the present regional centers and most of the present primary outlets. This provision of "control switching" equipment at not more than 150 points will be adequate to give every outward operator in the 2,400 toll centers direct access to such equipment. The remaining toll centers may have step-by-step toll equipment or a simplified form of crossbar toll equipment.

OPERATION WITH NATIONAL PLAN IN EFFECT

A call from Gettysburg, Pa., to Fresno, Calif., a three-switch call, will illustrate the method of handling calls. For comparison, the present manual operating method is first described for this same connection.

Present Manual Operation

The routing of many calls across the country involves one or more switches which are made at toll centers, usually primary outlets or regional centers which have been specially designated and equipped for this purpose in accordance with the principles outlined in

(Please turn to page 34)

THE PLANT MAN'S NOTEBOOK

BY RAY BLAIN • TECHNICAL EDITOR

IT APPEARS probable that important parts of central office equipment, such as relay, some day will be maintained in sealed containers under gas pressure and packed into frames carrying the cable. In the event of trouble the equipment, together with its container, will be removed and sent to the manufacturer for repair. It is believed, however, that troubles will not be experienced frequently on equipment of this design.

* * *

Three enlisted men, recently discharged from the Signal Corps, have been employed by Row W. Ammel, manager, Elyria (Ohio) Telephone Co.

Former M/Sgt. Francis P. Washburn now is working on maintenance of automatic central office equipment. Ex-T/Sgt. Wilfred H. Parizo presently is engaged on test board duties and S/Sgt. George Lindberg is working now on automatic central office equipment.

These men all have received their telephone training while on duty as GI's in the Signal Corps which has fitted them for good positions in the communication industry.

* * *

Now we hear that during the war the Germans had a recorder known as the "magnetophone," a machine which records sound on a half-inch tape of special fiber which is supposed to be of extra fine quality.

* * *

We are advised that the "voice with a smile" is produced by varying degrees of stress, emphasis and inflection, combined with what is known as "the personal interest tone." It is possible to create a fairly favorable impression in speaking merely by the proper application of stress, emphasis and inflection, which may be considered the "mechanics of voice technique." Voice training will improve telephone transmission and will increase its accuracy and efficiency. Voice recorders have proved most useful in the voice training of telephone operators.

* * *

Rough handling of lead covered cable prior to installation often causes trouble over its entire life span. The accompanying photograph shows how

cable can be damaged due to improper handling. When cable is procured under pressure, tests should be made to determine that the pressure is still up prior to installation.

* * *

A reader inquires as to the design of an explosion-proof telephone. This special-built telephone is intended for use in dangerous locations and has the switchhook inclosed in a metal chamber, sealed with lead in order to prevent explosions caused by sparks. The induction coil generally is sealed in a container and the ringer coils are shielded with metal so that the windings are protected against injuries which might develop a source of spark. Even the terminal block is provided with a cover to guard against accidental crosses which might cause a spark. The telephone generally is equipped with a lock which prevents entry by unauthorized parties.

* * *

The following is quoted from a letter received from Telephone Engineer G. O. Tapper who is now on duty with the Signal Corps in Tokyo:

"I have been transferred to the Tokyo wire center after 12 days at Yokohama. This wire center is a group of buildings housing the Japanese Electrical Communication Engineering Department. This consists also of one 10,000-line step type dial exchange, the toll switching center, telegraph center, radio wire terminals, etc. The toll switchboard consists of eight line-ups with over 600 operating positions. Each line-up has from 60 to 90 positions.

"The Japs have inter-city AC dialing but I have not found out what frequency they use as yet. Additional toll positions were being installed when the end of the war stopped all work of this nature.

"This equipment is not all being used at the present time. One night about 8:30 I entered the operating room and out of the 600 manual positions, only 30 were in use. One week day at 10:00 I counted 150 positions in operation; a Sunday morning at 8:30, 70 positions were in use. The Japs don't work on Sunday, except of course the utilities are operated.

"The Army has its own LD Switchboard at General Headquarters, a 12-position board just installed; we provide the exterior lines through the Japs' cable and open wire line systems. Switching is handled through the Jap dial system.

"It is extremely difficult to explain things of a technical nature to the Japs. The interpreters are, as a rule, not technical men and often lose the point in translation. I have been able to put the story across in most cases by means of sketches and waving both hands."

Mr. Welch reports Washington's reaction to President Truman's address on the State of the Union. . . . His own feeling is that the Chief Executive's program and his appeal to the people to put pressure on Congress to approve the administration's legislation have fallen flat.

PRESIDENT TRUMAN deserves a lot of sympathy and understanding from his fellow countrymen during this critical period. We must remember that he never expected to be President. Quite likely he did not want to be. As a smart, amiable, well meaning man he must have known that whoever occupied the White House during this troublesome postwar period was sure to get far more lumps, bumps and headaches than bouquets. Add to that the fact that most of these problems are not of his own making or choosing and we can readily see that Truman is a sort of victim of fate.

This is not to suggest that our President is simply a congenial Alexander Throttlebottom, who thought he was crawling under cover of the usually obscure security of the vice presidency, only to discover himself in the center ring of the Big Top with all the spotlights on him. He has demonstrated plenty of inherent ability, tact and attention to duty. But as Shakespeare said: (Twelfth Night) "Some are born great, some achieve greatness, and some have greatness thrust upon them."

Having said all that, we can then face the cold, hard fact that there must be some limit to our patience, sympathy and understanding with respect to the trials and tribulations of the presidency. All of which is by way of leading up to this reporter's estimate of President Truman's recent fireside chat on the State of the Union, and the reaction to the same in the political circles of Washington. Sorrowfully, the report must honestly be made on the minus side. The best we can do is give Harry S. Truman a nice big "A" for effort. Otherwise his recent talk to the nation was a flop. Some of his best friends are saying so.

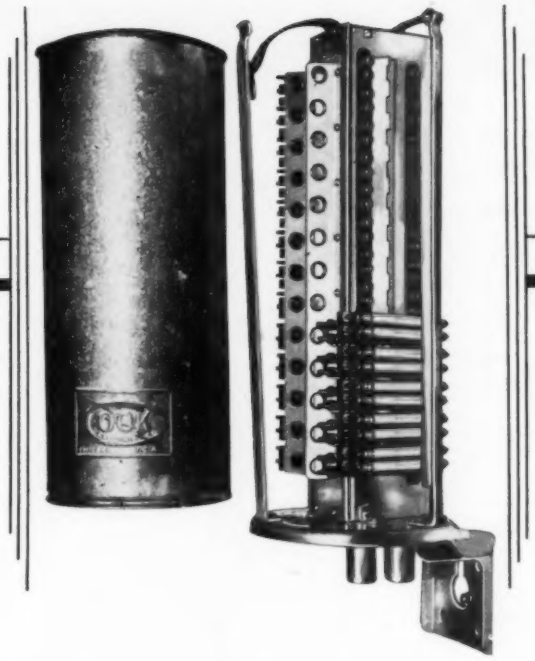
Of course, he said some mighty fine things, sound things, indisputable things. He said we've got to keep federal price controls until production catches up with demand. That's true. He emphasized the dangers of inflation. Fine stuff, indeed. He bawled out both labor and management for their failure to get together more on settling industrial strife. They both deserve it.

But when he came to the heart of America's great problem of today—labor trouble—he had nothing new to offer. He had to resort to a pretty sorry exhibition of buck passing—blaming Congress for not rubberstamping a piecemeal assortment of questionable measures which altogether do not constitute any forthright, comprehensive over-all general policy on the subject.

He did not attempt to explain why his latest and only original, yet halfway measure, the fact finding board scheme, should open the books of industry without also opening the books of labor unions. He had no answer to the most persistent criticism of the plan—that it would lead almost inevitably to compulsory arbitration, feared alike by both labor and management. He didn't even say he favored compulsory arbitration. He didn't say he didn't favor it. In fact, no intelligent, disinterested listener could honestly judge from the President's words just what his over-all ideas are on how to stop these strikes. He merely complained that Congress had failed to do something or other. He urged the citizens to put the heat on their congressmen so that they would do something or other. He offered no substantial reasons why either the people or Congress should take such action.

The fact that both the American people or Congress have not shown themselves actively, if not enthusiastically interested in the specific measures Truman wants enacted, is pretty plain proof that not nearly enough people are convinced that these prescriptions constitute the right medicine to bring about the cure. Most of

UA-20



Aerial to Underground
CABLE TERMINAL

by COOK

The UA-20 closely resembles the design of the famous Cook S-20 Pole Cable Terminal. The UA-20 is equipped with two entering nozzles and the cable chamber is equipped with terminating studs for each cable. Protection is provided by the Dual Gap H-20 Protector Unit which connects each aerial cable pair with its adjacent underground pair.

The UA-20 offers many advantages. By simply removing the fuses the overhead and the underground cables are quickly disconnected, permitting testing in either direction. Special test clips with fuse clip adapters and cords are furnished. Service is re-established by reinserting the fuses into the heavy spring clips, which insures constant electrical contact and no resistance loss, an important feature in toll cable transmission.

COOK ELECTRIC Company

Telephone Protection & Distribution Engineering Since 1897

2700 SOUTHPORT AVENUE • CHICAGO 14, ILLINOIS

these bills have been before Congress for some time. Some were in the hopper even before Truman got into the White House.

What measures?

(1) *Federalization of Unemployment Compensation.* Left wing labor leaders think this would be a good thing since it would give them eventual control over employment. But Congress and most of the population have not, so far, been similarly persuaded.

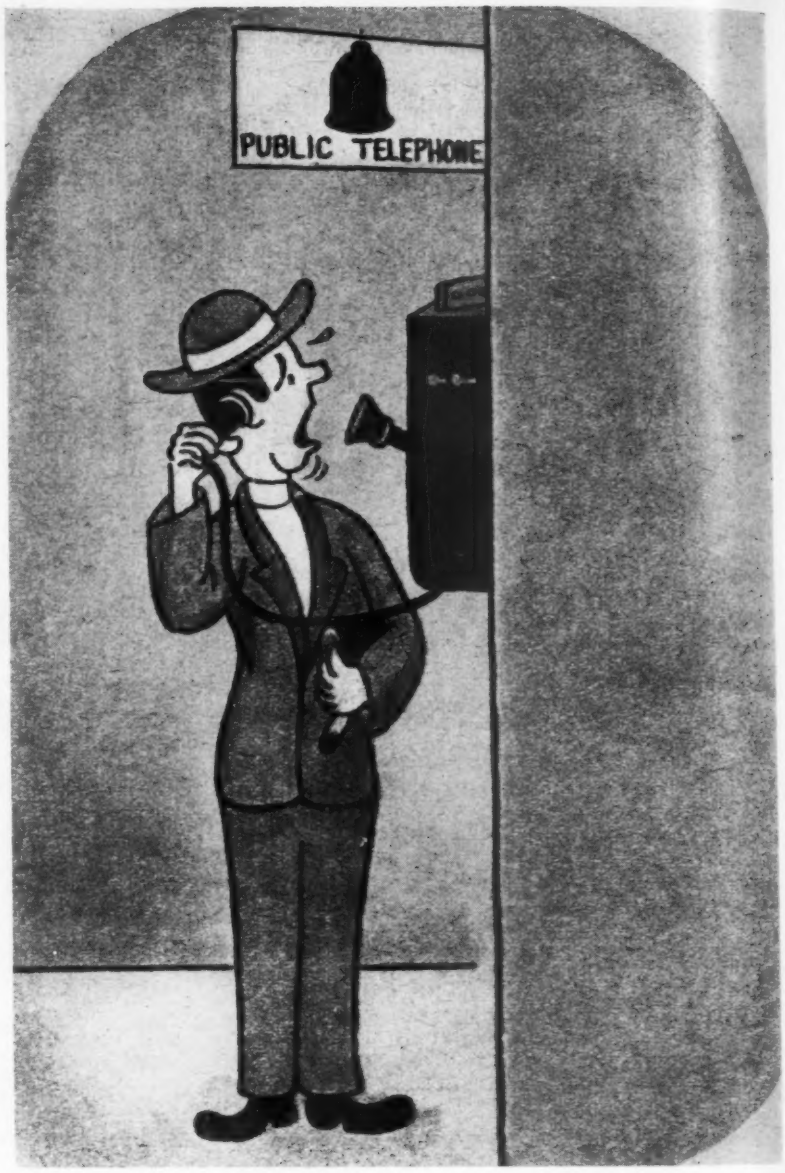
(2) *Increase in Minimum Wage of Fair Labor Standards Act.* Congress is making some progress with this, but there is a lot of difference of opinion as to whether the increase should be from 40 to 50, 60, 65, 70 or 75 cents an hour. Also there is a lot of difference of opinion over various employe exemptions, etc. It's important legislation, and Congress does well to refrain from hasty action.

(3) *Full Employment Bill.* The Senate watered the original Truman draft as being too socialistic and passed it. The House turned the Senate version inside out and passed a measure to protect free private enterprise as well as encourage employment. With two chambers of Congress so much at odds—what's the hurry, Mr. Truman? Isn't it just possible that the original proposal caused the delay by going too far?

(4) *Health Insurance.* Reasonable doubts whether this would lead to socialized medicine have resulted in strong objection to this bill. Congress has the right and duty to consider such objections.

(5) *Fact Finding Procedure.* There seems to be less general agreement about this than the other bills—chiefly because of confusion as to just what it is supposed to accomplish and what it might lead to. Again, with such honest dissension — what's the rush toward what might prove hasty, ill-considered action?

* * *



"I'd like to place a 'parson to parson' call please."

Next, let us consider just what has been the administration's contribution (as contrasted with Congress) towards progress and unanimity in solving the nation's widespread industrial strife:

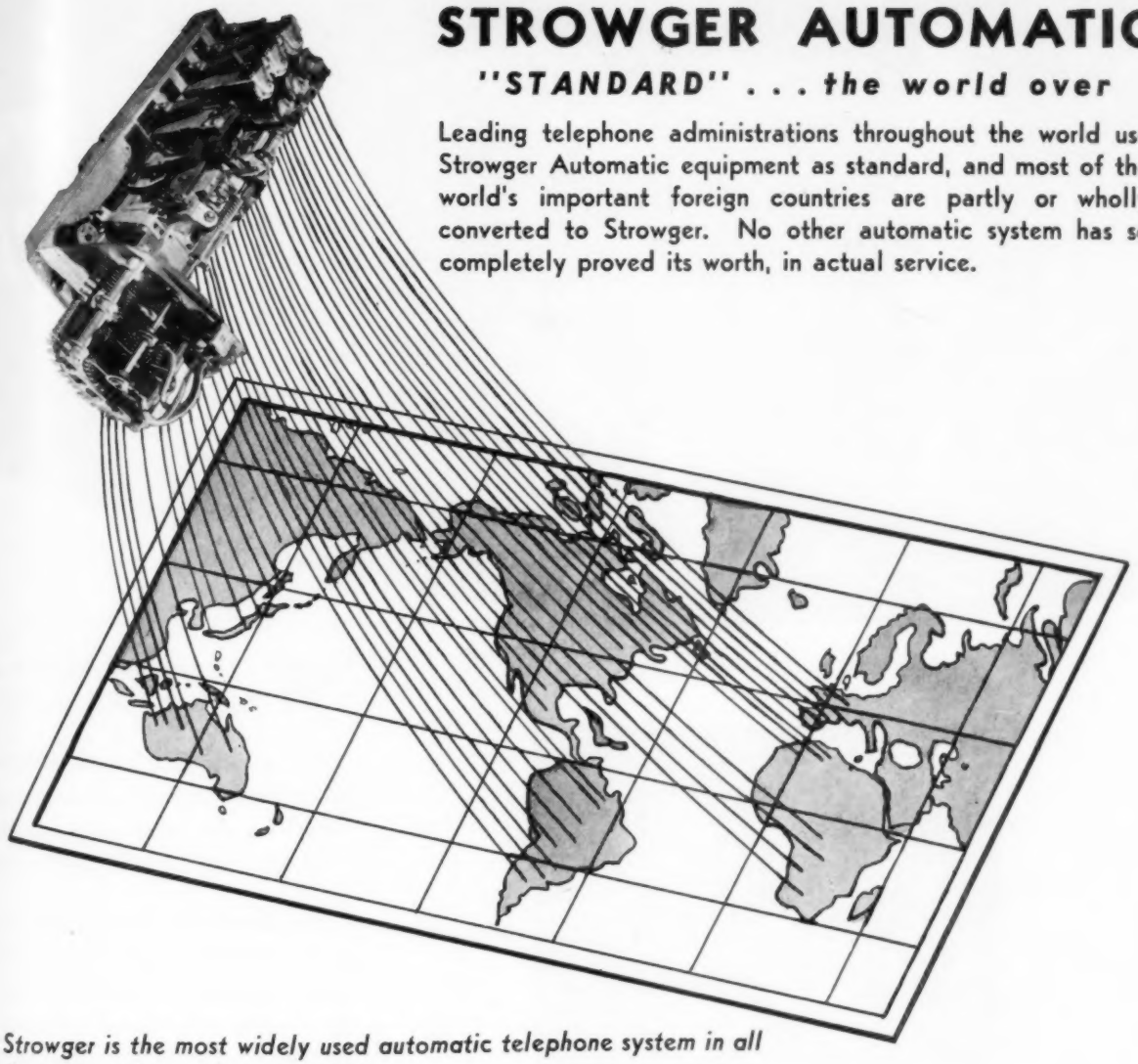
(1) The President endorsed the revolutionary "ability-to-pay" principles for wages, encouraged fishing expeditions into management's books, and caused an entirely new issue of conflict ("looking in the books") to emerge.

(2) The President put his so-called fact finding board scheme into operation even before Congress approved the bill on that subject.

(3) The administration permitted so-called "estimates" by the Office of War Mobilization to leak out, purporting to show that wages could properly be raised from 10 to 25 per cent without raising prices. Although both questionable and of doubtful responsibility, these "estimates" were seized upon and repeatedly cited by labor leaders to support new demands. Is this trying to make labor peace or just the opposite?

(4) The administration has assumed without suitable explanation or justification that it is the function of the federal government to fix industrial wages. Assuming the necessity for this during the war—just why is it necessary now? The people and Congress are entitled to at least some reasoning on that point. Is this the President's idea of a step toward the resumption of a free peacetime economy which he says is so much to be desired?

(5) The administration has signally failed to raise its voice in favor of law and order, or prepare measures designed to curb such violence and disregard of lives and property as has characterized recent gangster-like picketing practices. Why, in a country supposed to have responsible governmental authority, is it possible for a riotous mob to deny peaceful citizens the right to enter and leave industrial premises without the slightest attempt of the federal government to protect either their persons or their property?



STROWGER AUTOMATIC

"STANDARD" . . . the world over

Leading telephone administrations throughout the world use Strowger Automatic equipment as standard, and most of the world's important foreign countries are partly or wholly converted to Strowger. No other automatic system has so completely proved its worth, in actual service.

Strowger is the most widely used automatic telephone system in all these countries, and in many more:

AUSTRIA	PORTUGAL	ITALY	ARGENTINA
AUSTRALIA	SOUTH AFRICA	JAPAN	BRAZIL
GREAT BRITAIN	BULGARIA	JUGOSLAVIA	CANADA
GERMANY	CHINA	FINLAND	CHILE
HOLLAND	CZECHOSLOVAKIA	GREECE	URUGUAY
POLAND	HUNGARIA	CUBA	VENEZUELA

In 70 countries—throughout the world

AUTOMATIC ELECTRIC

Originators and Developers of Strowger Step-by-Step Machine Switching Automatic Dial Systems
Makers of Telephone, Signaling and Communication Apparatus . . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions

AUTOMATIC ELECTRIC SALES CORPORATION, 1033 W. Van Buren St., Chicago 7, U. S. A.
Export Distributors: INTERNATIONAL AUTOMATIC ELECTRIC CORPORATION

Sure, we "g
—STRO

"WE'RE going automatic as so can—
Automatic Electric. STRO tomati

"Soon as we decided on automatic, ht of S
we've heard Independent operating ing Str
lems were the same as ours, so we ger w
That was the first thing—Strowger w tomati

"Then, there was its *flexibility*. We' eral ex
grow. With Strowger Automatic in a anges
needs by merely moving switches and to ex
slip in the additional switches—he e to
Strowger equipment, with its standa t swi

"Of course we checked up on maint osts, b
once, but you have to live with it fo ears t
every part has been standardized so ight
simple and easy to learn. We'll nee e ma
Strowger exchanges, just as many oth anies

Would *you* like more facts on Strowg atic
talk to the Automatic Electric repres

". . . the automatic system we could be *sure* of."

". . . easy to meet changing needs. . . ."

". . . live with it for many years to come."

AUTOMATIC E

Originators and Developers of Strowger St Mac
Makers of Telephone, Signaling and Communication . . .

Distributors d Posse

AUTOMATIC ELECTRIC SALES CORPOR 033 W
Export Distributors: INTERNATIONA MA

ve "going automatic"
TROWGER automatic of course!

ic as so can—already have our order in with STRO tomatic, of course!

omatic, ht of Strowger. For years and years, erating ing Strowger equipment. Their prob- so we k ger would work just as well for us. owger w tomatic system we could be *sure of*.

y. We' eral exchanges now, and we expect to tic in a anges, it'll be easy to meet changing ches an to expand an exchange, we'll simply es—ha e to touch the existing equipment. standa t switches, is perfect for that.

n maint osts, because you buy equipment only ith it fo ears to come. In Strowger equipment, lized so ight for its job, and the circuits are 'e'll nee e maintenance man to handle all our nany oth anies are doing."

Strowg atic equipment? Please write us, or ic repres

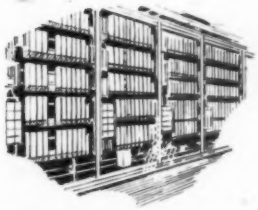
TIC ELECTRIC

owger St Machine Switching Automatic Dial Systems
mmunicatio ... Electrical Engineers, Designers and Consultants

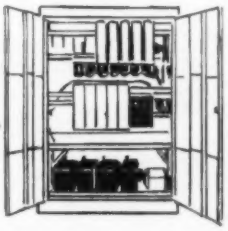
Distributors Possessions

CORPORA 033 W. Van Buren St., Chicago 7, U. S. A.
ATIONA MATIC ELECTRIC CORPORATION

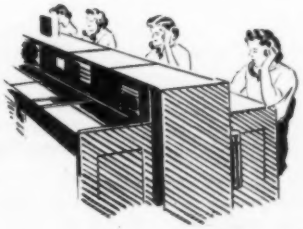
STROWGER AUTOMATIC
Performance Proved
TELEPHONE EQUIPMENT
can serve you in these ways:



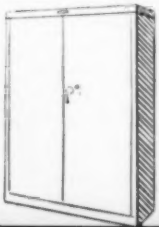
CENTRAL-OFFICE EQUIPMENT—Economically provides every wanted service, on a modern scale, in exchanges of every size, and with maximum flexibility for meeting growth or change in traffic or stations.



COMMUNITY AUTOMATIC EXCHANGES—These unattended dial exchanges make small exchanges profitable, solve the "operator problem," and improve service on both local and long-distance calls.



TOLL SWITCHING EQUIPMENT—To meet every modern operating requirement. Speeds up toll service, improves toll line efficiency, saves operating costs.



PRIVATE AUTOMATIC BRANCH EXCHANGES—Provide your business subscribers with fast dial connections on local calls, and improved service on city and long-distance calls.

Why does the President remain silent on the Hobbs Bill (now struggling through Congress on its own power) to compel union labor to abide by the same rules against criminal racketeering practices which apply to everybody else? Why does the administration remain silent about monopolistic and arbitrary practices such as those of Musician Czar Petrillo which, if practiced by any employer or private corporation, would quickly subject them to federal prosecution under the anti-trust laws?

* * *

No, summing up, Truman's appeal gets us nowhere and accomplishes nothing, because even those who are pleased, because it favors their side, know that it is half-hearted and one-sided and cannot, on its face, command the conviction of a courageous attempt to solve the whole problem with justice for all and partiality for none. That is the reason the President's so-called program has fallen so flat. Consider the reception it has had so far:

Congress, controlled in both houses and on all committees by the President's own party, hesitates to approve.

Industry, as represented by General Motors, wants no part of the fact finding plan.

Organized labor—as represented by the AFL—doesn't want it either.

Neither does the CIO whose affiliated automobile workers refused to go back to work despite the President's request that they do so while his fact finding board does its stuff.

Popular support of the fact-finding program and most of the other measures has, so far, been noticeably lacking; otherwise Congress would have jammed the bills through, long ago.

This reporter's own estimate, therefore, is that the President's appeal fails because both industry and most elements of organized labor have shown they have no confidence in his plans. Most important, of course, is the serious question whether such a policy, based on fact finding, would have any immediately beneficial results. There is no question at all that in the long run it leads straight toward a state of affairs which most Americans claim to abhor—state control of industry and state control of labor. For when the state, meaning the federal government, undertakes to render a formal opinion on the merits of a labor controversy, counting on public opinion to back up its "recommendations," only one more short step is needed to convert the "recommendation" into an order.

We all know that Mr. Truman is a man of good faith, struggling gallantly with a job which he never sought. We can only conclude that Mr. Truman has failed to comprehend the direction in which his proposals lead. We may be confident that Mr. Truman does not consciously seek to bring the corporative state into being in our country.

Further, he has indicated that he has no profound convictions regarding the plan which he has proposed by suggesting that he would be sympathetic to alternative proposals, if Congress cares to offer them. Mr. Truman, like the rest of us, ardently hopes for a workable federal labor policy—one which will reduce industrial conflict to a minimum and get the wheels turning, with consequent benefits to all. But his speech served only to reinforce the conviction that his own program will not turn the trick.

>> *The wife of a Cleveland, Ohio, cafe owner, telephoning to him at home from an unlighted booth in the cafe, suddenly changed the subject of their conversation. "Three men," she said, "have just come in with handkerchiefs over their faces and guns in their hands. Call police." The patrol car was prompt.*

>> *Of all places, Okinawa during the fighting there, scarcely seemed the right setting for a radio-telephone conversation beginning with "Hello, is that you, Cutie?" But Cutie was the telephone code name for a fighter squadron.*

Party Was Not at Home

A long distance telephone operator in Atlanta, Ga., was put on the spot when a small boy wanted to talk to Santa Claus personally.

The operator answered a routine call for long distance and heard a small boy's voice say somewhat excitedly, "I want to speak to Santa Claus."

"Where do you think he might be now?" asked the operator.

"He is at the North Pole," said the boy confidently.

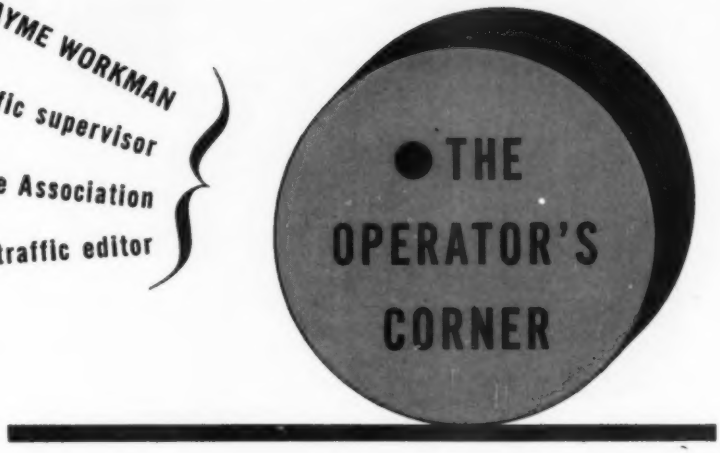
The operator asked the boy to wait a minute. She called in a supervisor for advice on the toughest request of a busy day. There was a conference and then the boy was told:

"We are very sorry, but Santa Claus has just left the North Pole to come to see you."

First French Telephone System Unpopular

When France finally adopted the telephone system late in the 19th century, it became so entangled by poor management that it was of little use to the country. Perhaps the most serious blunder made by telephone officials was the refusal to furnish subscribers with instruments, which meant, that if they leased a telephone wire they had to go out and buy whatever kind of gadget the dealers had to offer. The inevitable result was that few telephones in all of France even faintly resembled each other, and most of them didn't work anyway.

by MAYME WORKMAN
traffic supervisor
the Illinois Telephone Association
and traffic editor



UNFORTUNATELY many firms entertain the mistaken idea that anyone can be a PBX (private branch exchange) operator. The employe who assumes this responsibility frequently is a girl who recently has been employed by the company and she is expected to assume the important role of switchboard operator in the establishment sans instruction or training. Her predecessor if she is so inclined, may give her a few brief instructions before leaving, saying, "Well, sister, she's all yours."

The new girl is left with a helpless feeling and, having no source from which she can obtain information, tackles the job and does the best she can. Naturally, under these conditions, her best falls far short of what is desired. Of course, she will be responsible for cut-offs and other service irregularities when she is unfamiliar with the manipulation of the equipment and unimpressed with the seriousness of such errors.

Generally speaking, so-called Independent telephone companies do not employ PBX supervisors to make periodic visits to private branch exchange subscribers and to render assistance in securing and instructing new PBX operators. In most cases there would be no justification for the employment of such a supervisor, due to the number of PBX subscribers involved.

What, then, is the answer in solving the problem of instructing and assisting PBX operators in territories served by Independent companies? The logical solution is to have the chief operator assume the major responsibilities of a PBX supervisor. Arrange a schedule that will enable her to make periodic visits to PBX subscribers. Get acquainted with the girls who operate the private branch exchange switchboards. Invite them to visit the central office. Permit them to listen in and observe how their calls are handled. Prepare and furnish written or typewritten PBX instructions, when necessary. Give as much assistance as possible when a new PBX operator is employed.

The first step in setting up such a program is to have the chief operator call on the office manager of the firm, explain the purpose of her visit and secure his permission to contact the PBX operator. The chief operator should be tactful in making these visits. Her mission is to be helpful, not critical. She should observe the equipment and report any defects. She should listen attentively and sympathetically to all service criticisms and handle them in the same manner as service complaints coming to her attention in the central office. The chief operator should keep in mind that the important part of her initial visit is to become acquainted with the office manager and PBX operator.

The chief operator, in her visits, should be alert to observe cases where the PBX operator is overloaded with routine duties which prohibit her from giving proper attention to the calls coming over her switchboard. At the opportune time, she should convey this information to the office manager, pointing out the importance of the PBX operator's work at the switchboard and its effect upon the firm's clientele. Inattentive, slow service at the PBX board easily can result in a lost customer. The customer can observe that the clerks are busy when he comes to the store to make a purchase, but he cannot understand why he has to wait for the store to answer his call or to reach a clerk or department he has requested when he tries to make a purchase by telephone.

All chief operators should be interested in their PBX subscribers and the girls who operate their private branch exchange switchboards. An efficient PBX operator can save many minutes of precious time in the central office by the manner in which she passes her calls to long distance, requests an AG, passes a WH report or asks for charges.

If an operator reports she is having difficulty with a PBX operator on cut-offs, for example, in her own office or at some distant point, the chief operator should give this report her immediate attention. If the difficulty is in her area, she should make an investigation and volunteer any necessary assistance. If the difficulty is at some distant point, she should pass the information to the chief operator there so she may investigate and take corrective action.

Questions for Illinois Operators

(1) In clearing a long distance circuit, is it necessary to clear to distant points if they answer before your own long distance operator does?

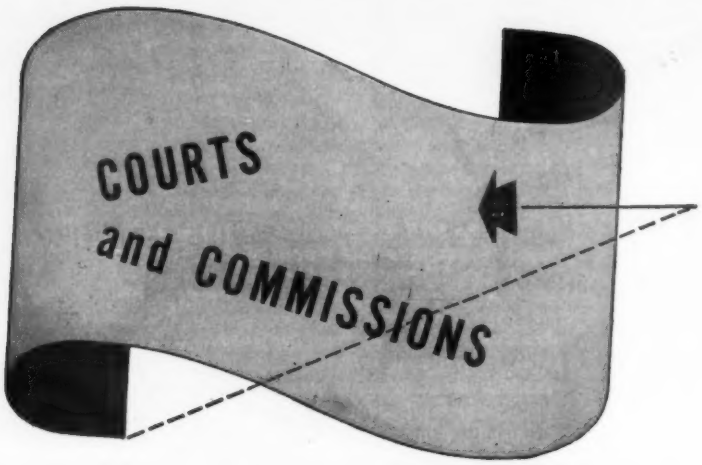
(2) How long can you hold the circuit when you encounter an MX precedence and, can you use your original filing time if you have to release the circuit and AG later?

(3) What procedure can be taken to eliminate cut-offs on calls to a place where PBX boards are in use?

(4) How is the ticket rated if the rate to the called number differs from that to the locality shown in the "called place" space? For example, call passed by address name, TTC says "(Address name) is a toll station."

(5) If you have left word on a call and your party agrees to talk any time, how long should you wait before you try again?

Answers to these traffic questions are presented on page 34.



Missouri Commission Revises Base Rate Method

An order declaring that future telephone, telegraph and other public utility rates in Missouri would be based upon undepreciated original cost valuation was handed down December 28 by the Missouri State Public Service Commission.

In the order, which cleared the way for possible rate reductions, the commission directed that the income from depreciation reserves must be deducted from the operating costs of the utilities. Since several of the large utilities have depreciation accounts running into millions of dollars, much of which is invested or used in expansion of plant property, the income from this fund runs into hundreds of thousands of dollars annually.

The commission fixed a rate of 3 per cent for figuring the income from the reserve funds. In cases where utilities now are earning what the commission figures is a fair and reasonable return, rate reductions will result. Until the utilities file records required under the commission order, it was pointed out, it will not be possible to determine what, if any, utilities may have to reduce their rates.

Utilities affected by the order include those furnishing gas, electric, water, telegraph, telephone and heating service.

Income from the funds in the depreciation accounts heretofore has not been taken into consideration in fixing rate bases, although the money that goes into the funds is paid by the consumer for the sole purpose of replacing the plants as they wear out.

The commission declared that the "depreciation funds are in the nature of trust funds, maintained for and dedicated to the replacement of worn out plants. The utilities are the custodians of the funds."

In setting up the method of predicating a rate base upon the original cost of the utility, the commission said it is seeking to simplify the procedure and to establish a stable system.

"A rate base predicated on original cost can be fixed with a minimum of delay, and original cost, having been once established, can be brought up to date on short notice," the commission said. "Moreover, and of equal importance, is the fact that original cost avoids the inflationary effects of reproduction cost in the establishment of the rate base. Also, the consideration of income from the investment of moneys in depreciation reserve funds in the fixing of rates is in the direction of reducing the over-all cost of service."

Representatives of various Missouri utilities had opposed at a hearing the principle contained in the commission's order, and it was expected an appeal from the order would be taken.

V V

Order Louisiana Independent To Observe Tariff Rates

Charged with penalizing subscribers 10 per cent for delinquent payment of their bills and also of showing discrimination in rendering service, Daniel A. Madere, doing business as the Reserve (La.) Telephone Co. on December 10 was ordered by the Louisiana Public Service Commission to refile with it a complete tariff of rates, charges and practices and adhere to them.

Evidence given by the commission's chief engineer at a hearing held November 28 indicated that the defendant had been charging his subscribers a penalty of 10 per cent if their bills were not paid by the 10th of each month, although defendant's tariff on file with the commission carried no such provision. The chief engineer also testified, and defendant admitted, that a certain telephone located in the place of business of E. J. Guidry had been charged for at defendant's extension rate, as an extension of the telephone located in Mr. Guidry's residence, whereas in fact such telephone was a separate station.

Mr. Madere, of the telephone company, was instructed to cease charging for telephone station service at extension rates and to assess charges for each separate station at rates provided in his tariff on file with the commission.

A complaint that a telephone was taken from the premises of Mr. Guidry for repair and then was not returned was dismissed on evidence that reinstallation had been made since institution of the complaint.

V V

Pennsylvania Court Allows Wires to Remain on Walls

Right of the Bell Telephone Co. of Pennsylvania to maintain telephone wires and cables on two walls of a Wilkinsburg five-story apartment building, under a right given by a former owner, was upheld by three judges in the Court of Common Pleas December 20.

The court dismissed an injunction suit brought by Louise Templeton and Anna M. Welch, owners of the building, who acquired it six years ago.

V V

Piedmont, Va., Telephone Co. Issued Charter

Issuance of a charter to the Piedmont Telephone Co. of Manassas, Va., organized for the purpose of purchasing all the property of Tri-County Telephone Co., Inc., of Haymarket, Va., was annnounced December 26 by the Virginia State Corporation Commission.

The property which the new corporation will purchase consists of telephone lines and equipment in parts of Prince William, Fauquier and Loudoun coun-

ties. Exchanges are located in Haymarket and Aldie, Loudoun County. The new company estimates that it will operate or construct 300 miles of line.

Authority was given for a maximum capital of $50,000 and a minimum of $5,000 to be divided into common stock at par value of $10 per share.

W. T. Costello, Aldie, has been named president of the Piedmont company; Lee Howdershell, The Plains, is vice president, and Stanley A. Owens, Manassas, secretary-treasurer. The officers also will serve as directors, as will John W. Ellis, Nokesville; C. C. Furr, Broad Run; T. Gales Hutchinson, Aldie; Luther L. Lynn, Catharpin, and C. B. Roland, Haymarket.

V V

Public Rules Hearing Ordered By California Commission

The California Railroad Commission on December 18 ordered a public hearing on whether any rules should be filed by the Pacific Telephone & Telegraph Co. and the Southern California Telephone Co. providing for notice to subscribers whose service would be affected by changes planned by the companies.

The proposed notices would outline the companies' intentions to do work on equipment or facilities used in providing telephone service.

V V

Minnesota Independent Buys Waseca County Properties

The Wabasha County Telephone Co., Plainview, Minn., on December 26 was authorized by the Minnesota Railroad & Warehouse Commission to purchase telephone property from the Central Telephone Co. in New Richland, Waseca County, and also the Waldorf exchange of the Central West Co. in the same county.

In neither case was any consideration given by the commission as to the price paid therefor, nor was any approval of rate changes or diminution of service in the territories indicated in the orders.

V V

Pacific Bell Purchases Paradise (Calif.) Company

The Paradise (Calif.) Telephone Association has completed negotiations with the Pacific Telephone & Telegraph Co. by selling portions of its plants and equipment through H. E. Owens, division manager of the Pacific company.

This equipment will be used by the Pacific company for rebuilding the telephone system of the Paradise area. Mr. Owens said his company will spend $140,000 in providing a new plant and additional equipment as well as more long distance circuits between Paradise and Chico. He said the plant should be ready for use by November 1, 1946.

COMING CONVENTIONS

Minnesota Telephone Association, St. Paul Hotel, St. Paul, January 28, 29 and 30, 1946.

Kentucky Independent Telephone Association, April 4 and 5, 1946. No hotel named as yet.

Nebraska Telephone Association, Paxton Hotel, Omaha, April 9 and 10, 1946.

Iowa Independent Telephone Association, Ft. Des Moines Hotel, Des Moines, April 11 and 12, 1946.

United States Independent Telephone Association Executives' Conference, Edgewater Beach Hotel, Chicago, April 16 and 17, 1946.

Ohio Independent Telephone Association, Deshler-Wallick Hotel, Columbus, April 23 and 24, 1946.

Indiana Telephone Association, Severin Hotel, Indianapolis, May 1 and 2, 1946.

Illinois Telephone Association, Pere Marquette Hotel, Peoria, May 8 and 9, 1946.

Wisconsin Independent Telephone Association, Park Hotel, Madison, May 14, 15 and 16, 1946.

New York State Telephone Association, Hotel Onondaga, Syracuse, May 22 and 23, 1946.

Pennsylvania Independent Telephone Association, Lawrence Hotel, Erie, June 4, 5 and 6, 1946.

Michigan Independent Telephone Association, September 18 and 19, 1946 (tentative). No hotel named as yet.

United States Independent Telephone Association, Stevens Hotel, Chicago, October 14, 15 and 16, 1946.

V V

May Intervene on Recording

The Federal Communications Commission on December 13 adopted an order authorizing Thomas A. Edison, Inc., to intervene and to participate fully as a party intervenor in the matter of use of recording devices in connection with telephone service. Similar authority was granted December 10 to Soundscriber Corp. (TELEPHONY, November 10, page 23.)

V V

To Ask Rate Hike

At its recent annual meeting, the Oakdale (Neb.) Telephone Co.'s stockholders authorized the directors to apply for an increase in rates if proposed REA construction is begun in its territory. Manager George Daugnette told the meeting that if this program is carried out, extensive changes must be made, new lines constructed or the entire system rebuilt.

V V

Firth, Neb., Company Gets Rate Increase

The Firth (Neb.) Telephone Co. recently was authorized by the Nebraska State Railway Commission to increase by 25 cents the monthly rate for all classes of service, making the new rates $1.25 for all party line service and $1.50 for individual lines. (TELEPHONY, December 1, page 29.)

As of December 31, 1944, the company served 19 business subscribers, 52 residence subscribers and 197 farm party lines subscribers. Its 108 shares of capital stock are held by 77 persons.

The commission found that an increase in revenue was necessary to meet increased cost of materials and wages and to rehabilitate and repair facilities that have deteriorated through inability to get materials and labor. In 1932 the company had a flat rate of $1.25 a month for all services, but found it necessary to readjust them to meet changed economic conditions and drought in that area.

Estimated revenues for 1945 were $3,904, and expenses totaled $3,964, a deficit of $60. The total fixed investment was $20,492, depreciation reserve $7,128, cash $3,624, materials and supplies $440, leaving the total net investment at $17,697.

The commission estimated that the rate increase, effective January 1, would produce total revenues of $4,072 for 1946. It said that the estimates and calculations did not take into consideration intended rehabilitation of plant, accelerated repairs and other increased costs of operation. The applicant now is confronted with replacing its entire switchboard operat-

ing force, which will mean increased operating expense and time delay, it stated.

The commission also found the rates as low or lower than generally prevail at exchanges of similar size and circumstances, and stated they were justified fully.

V V

Summary of Commission Rulings and Hearings

Federal Communications Commission

December 6: Granted authority for 10 days to point-to-point radio-telephone station in fixed public service, using regularly licensed equipment, frequencies, power and emission, to communicate with Department of Communications, Japanese Government at Tokyo, to conduct two-way transmission tests.

December 7: Granted American Telephone & Telegraph Co. permission to amend tariff on one day's notice, to permit acceptance of collect calls between U. S. and Great Britain to June 23, 1946.

December 10: Granted American Telephone & Telegraph Co., Long Lines Department, Dixon, Calif., modification of license of point-to-point telephone station in fixed public service, for additional frequency and delete two special provisions with reference to transmitting equipment.

December 17: Granted New York (N. Y.) Telephone Co. authority to supplement existing facilities between Middletown and Port Jervis. Estimated cost, $73,400.

December 17: Granted Mountain States Telephone & Telegraph Co. authority to supplement existing facilities between Cheyenne, Casper and Sheridan, Wyo. Estimated cost, $166,000.

December 17: Granted American Telephone and Telegraph Co., Long Lines Department, Dixon, Calif., authority from December 18, 1945, until December 1, 1946, for point-to-point radio-telephone station in fixed public service, using regularly licensed equipment, frequencies, power and emission to communicate with Post & Telegraph Department, Wellington, N. Z.

December 18: Granted American Telephone & Telegraph Co., Lawrenceville, N. J., construction permit for two additional transmitters.

December 18: Granted American Telephone & Telegraph Co. permission to establish rates and regulations for overseas message toll service and program transmission between U. S. and Barbados; also permission to reduce rates for overseas message toll service between U. S. and Japan and establish rates for program transmission between San Francisco, Calif., and Tokyo, Japan.

December 18: Granted American Telephone & Telegraph Co. and Pacific Telephone & Telegraph Co. permission to file schedules of charges, effective January 1, amending tariffs to discontinue "other line" rates for message toll telephone and message telegram services to or from certain connecting independent company points, and to establish direct rates between rate centers for message toll telephone service and direct "square" and "state" rates for message telegram service.

December 19: Granted American Telephone & Telegraph Co., Dixon, Calif., authority for three months to point-to-point radio-telephone station in fixed public service, using regularly licensed equipment, frequencies, power and emission, to communicate with station near Tokyo, under control of Allied Supreme Commander, and operated by Japanese Department of Communications, to render public radio-telephone service.

California Railroad Commission

December 14: Granted order permitting California Water & Telephone Co. to file rates for Desert Hot Springs, effective December 17, 1945.

December 28: Granted Pacific Telephone & Telegraph Co., San Francisco, and Southern California Telephone Co., Los Angeles, authority to modify directory listings.

December 28: Dismissed complaint of Kathie Zahn against Pacific Telephone & Telegraph Co. concerning repair service.

December 28: Authorized Delta Telephone & Telegraph Co., Courtland, to eliminate regulation concerning depreciation fund establishment.

Illinois Commerce Commission

December 27: Hearing on complaint of Cherry Valley, Winnebago County, concerning free line service by Illinois Bell Telephone Co. and Midwest States Telephone Co. between Cherry Valley and Rockford. Postponed from December 12.

Kansas Corporation Commission

December 18: Issued application of C&M Telephone Co. for permission to cease operating at Madison, and of Madison Telephone Exchange for certificate of convenience and authority to do business there.

December 18: Issued application of Lawrence and Ella Harrington, doing business as Madison Telephone Exchange, for certificate relating to note secured by mortgage for $24,000.

January 14: Hearing on application of B. Peterson, doing business as Cedar Point (Kan.) Telephone Co., for certificate of convenience and authority to transact business, and of T. M. Hougardy to transfer franchise and cease operating there.

January 14: Hearing on application of T. M. Hougardy, doing business as Walton (Kan.) Telephone Co., to transfer franchise and cease operating, and of B. Peterson for certificate of convenience and authority to do business there.

January 14: Hearing on application of T. M. Hougardy to cease operating Saffordville (Kan.) Telephone Co. and transfer franchise, and of B. Peterson for certificate of convenience and authority to operate there.

Oklahoma Corporation Commission

January 15 to 18: Hearing continued on application of Southwest Associated Telephone Co., Lubbock, Tex., for rate increases at 27 Oklahoma exchanges.

February 20: Hearing continued on application of Farmers Mutual Telephone Co., Weatherford, for authority to make extra charge on long distance calls through Southwestern Bell.

V V

Illinois Telephone Men Open Pheasant Season

For many seasons J. W. Lower, president of the Lanark (Ill.) Mutual Telephone Co. and D. K. Weed, manager of the company, have opened the pheasant hunting season by inviting telephone men to spend the day hunting on Mr. Lower's four farms.

(Standing, Left to Right) J. W. LOWER, president, Lanark (Ill.) Mutual Telephone Co.; JOE LOWER, son of Mr. Lower, Lanark, Ill.; WALTER GARLAND, Illinois Northwestern Telephone Co., Savanna, Ill.; REX LOWER, son of Mr. Lower, Lanark, Ill.; CHESTER SELLS, representative of the Automatic Electric Sales Co., Chicago, Ill.; ANDY WEISZ, Lanark, Ill.; D. L. WEED, manager, Lanark (Ill.) Mutual Telephone Co.; J. I. KENNEDY, president, Northwestern Telephone Co., Freeport, Ill. (Seated, Left to Right) M. LEWIS, secretary, Albany (Ill.) Telephone Co.; H. WHITE, manager, Albany (Ill.) Telephone Co.; RALPH WATTS, Lanark, Ill.; DON ADAMS, lineman, Lanark (Ill.) Telephone Co.; TOM VICKREY, Princeton, Ill.; CHAS. REESE, representative, Kellogg Switchboard & Supply Co., Princeton, Ill.; DEAN LOWER, son of Joe Lower, Lanark, Ill.

The annual gathering for 1945 was held November 11 and the group, made up mostly of telephone men, included: Chester Sells of Automatic Electric Sales Co., Chicago, Ill.; Walter Garland, Illinois Northwestern Telephone Co., Savanna; J. I. Kennedy, president Northwestern Telephone Co., Freeport, Ill.; M. Lewis, secretary, Albany (Ill.) Telephone Co.; H. White, manager of the Albany company; Charles Reese, representative of the Kellogg Switchboard & Supply Co., Princeton, Ill.; Don Adams, lineman of the Lanark Telephone Co.; S. C. Anderson, manager, Jo Daviess County Mutual Telephone Co., Massbach, Ill.; Andy Weisz and Ralph Watts, Lanark; Tom Vickrey, Princeton, Ill.; Mr. Weed; Mr. Lower, his two sons Joe and Rex Lower and a grandson Dean.

AMERICAN

MODEL B4

Crew Compartment Now in Body - More Room . . Improved Re-Sale Value

By incorporating the 4-man crew compartment into the body of the new B-4 line construction body, American provides these two important benefits . . . crew comfort and improved re-sale value.

A full 39″ of depth gives the crew plenty of room to stretch their legs. No more hugging knees to chin. Visibility and ventilation have been improved, too; and provision is made for a heater installation to give added comfort on cold days. The crew reaches the job fit and cheery in the new American B-4.

The American body for line construction work outlasts the chassis at least 2 to 1. The crew compartment is not only fully enclosed and safe, but in the B-4 design, the compartment is also an integral part of the body. Hence, the chassis and cab remain standard which leaves them readily resalable in the open market.

The new B-4 has all of the unique features which have made American bodies first in the industry for more than 30 years. You can get complete information in Bulletin B-4, mailed promptly upon request.

AMERICAN CAM LOCK IMPROVED, TOO

The lock now moves on ball bearing parts. Makes it much easier to open and close and eliminates jamming . . . on the improved B-4 body.

ANY TYPE CHASSIS

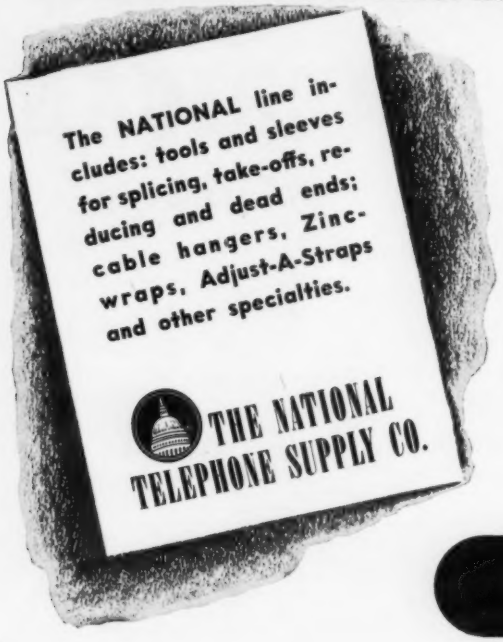
The B-4 can be mounted on all conventional or C.O.E. type of chassis, having CA dimensions from 83″ to 116″.

The AMERICAN COACH & BODY COMPANY
9503 Woodland Ave. CLEVELAND. OHIO

ACB and

. . . not just as good—BETTER!

SPLICES MADE WITH NICOPRESS ARE STRONGER THAN THE LINE ITSELF!


The NATIONAL line includes: tools and sleeves for splicing, take-offs, reducing and dead ends; cable hangers, Zinc-wraps, Adjust-A-Straps and other specialties.
THE NATIONAL TELEPHONE SUPPLY CO.

That's a strong statement but it's a fact. So, when your line needs repairs be sure to use Nicopress sleeves. Eliminate the hazards of noisy joints and possible line failure. You'll find maintenance costs less, takes less time—and in these days every saving is important.

Other well known National products are listed at the left. Telephone men now using them vouch for their dependability under all conditions of service.

DISTRIBUTED BY

AUTOMATIC ELECTRIC SALES CORPORATION

1033 WEST VAN BUREN STREET • CHICAGO 7, ILLINOIS

SYNTRON

100% Self-Contained Gasoline Hammer

PAVING BREAKERS

A One-Man Crew that will SAVE MONEY for You

Busting Concrete
Cutting Asphalt
Digging Clay, Shale, and frozen ground—
and numerous other jobs.

Write for illustrated folder 8-45

SYNTRON CO.
210 Lexington, Homer City, Pa.

***What the* COMMUNICATIONS WORKER NEEDS**

to know about electricity

Radio men, telephone engineers, telegraphy technicians — all workers in the communication industry — here is a book written expressly for you. It gives you a clear, practical explanation of the fundamentals of electrical engineering *upon which communication is based.* All the explanations, all the illustrations, all the applications are taken from the communication industry and not from the power industry.

THE ELECTRICAL FUNDAMENTALS OF COMMUNICATION

By A. L. Albert, Professor, Communication Engineering, Oregon State College; Professor, Electrical Engineering, Purdue University (1942-43); 550 pages, 6x9, 359 illustrations, $3.50.

Presents the electrical fundamentals of communication, including the three divisions—telegraphy, telephony, and radio with its allied branches. Starts with electronics, explains what the communication technician wants to know about direct current, conductors, resistors, insulators, and discusses such topics as the magnetic field and inductance and the electric field and capacitance solely from the point of view of the communication industry.

COVERS SUCH TOPICS AS:

- Electric measuring instruments
- Electric networks
- Bridge circuits
- Transmission of electromagnetic waves
- Vacuum tubes as circuit elements
- Electroacoustics

TELEPHONY PUBLISHING CORP.
608 S. DEARBORN ST., CHICAGO, ILL.
Telo. No. Wab. 2435

NORTHEASTERN IOWA GROUP HOLDS ANNUAL MEETING

Part of the group of Northeastern Iowa telephone men and women that attended the recent meeting at Plainfield, Iowa.

PROVING conclusively that the group is now a growing organization, that it is no longer on an experimental basis and is looking forward to increased interest from companies that at first hesitated to take part, the Northeastern Iowa Telephone Group held its first annual meeting at Plainfield December 6. Previous district meetings during the year had been held at Castalia, Alta Vista and Jesup and the total attendance at the four meetings was approximately 200.

President C. C. Pearce, manager of the Farmers Telephone Co., Riceville, opened the meeting with a timely address which impressed his listeners with the fact that the telephone industry is now at a place where it is not a question of getting business but a question of keeping it and that it is time to stop and see if the industry is doing all it can to keep its subscribers sold.

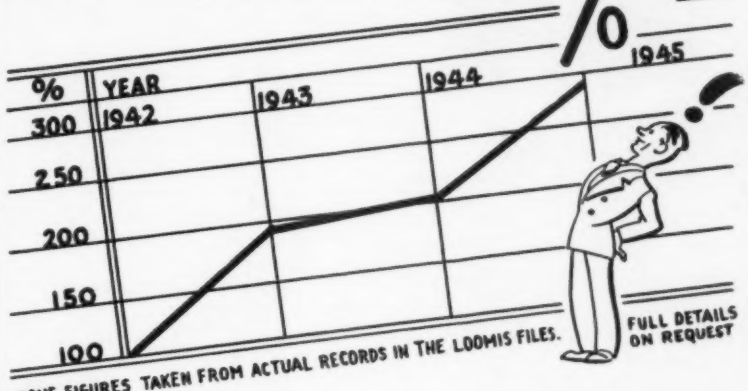
"Telephone service consists of many things," said Mr. Pearce. "First, do the operators at all times give the best service possible? Are they prompt and courteous? . . . How about the lineman? Is he neat about himself? Does he keep his service car clean? Does he walk right into the house to repair the telephone with mud on his overshoes or does he take them off at the door and remove his hat or cap as he enters the house?

"Is he prompt in repairing trouble? Is trouble taken care of in the evening or on Sunday or do you let it go if he happens to be a party that you think won't mind waiting overnight or a few extra hours for service? . . ."

Making a comparison between the telephone business and the household appliances and automobile business, Mr. Pearce stated that in his opinion the telephone industry would see some real salesmanship if two or three companies were operating in the same community.

"We would want people to believe in our product," said Mr. Pearce, "and we would do our best to keep them sold on the idea that the service and equipment

HOW MUCH IS A % ?



ABOVE FIGURES TAKEN FROM ACTUAL RECORDS IN THE LOOMIS FILES.

FOR a quick, accurate view of trends in your profit-making activities, percentages really fill the bill.

For example, the above graph shows the steady, profitable increase in telephone directory advertising sales in the Southern Continental Telephone Company's 30 communities in Tennessee and Kentucky. The percentages are accurate. They show increased profit since LOOMIS began handling advertising sales at the end of 1943.

*Roland T. Baird, Vice-President, 502 Gettle Bldg., Fort Wayne 2, Indiana, would be glad to discuss with you the sales experience (22 years, $28,000,000 in advertising) that stands behind this record.

★

Loomis ADVERTISING COMPANY

502 Gettle Bldg., Ft. Wayne 2, Ind.

506 Olive St., St. Louis 1, Mo. ★ 20 West 9th St. Bldg., Kansas City 6, Mo.

Omaha Nat'l Bank Bldg., Omaha 2, Nebr. ★ 6908 Market St., Upper Darby (Phila.) Pa.

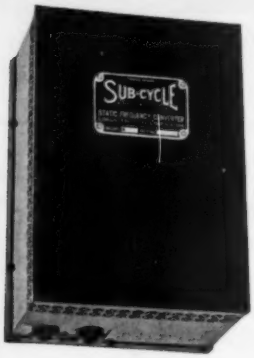
★

QUIET!

THAT'S

SUB-CYCLE

"MASTER"
RINGING CONVERTER



Subcycle Ringing Converters are designed for use on 105-125 volt 60 cycle A.C. Supply i.e. Regular Lighting Power.

Consider the following advantages offered by Subcycle to meet your requirements:

- *No Moving Parts—Nothing to Adjust*
- *Provides Ample Power*
- *Requires No Routine Maintenance*
- *Output Voltage Regulation between no load and full load is very close*
- *Cannot Interfere with Radio Reception*
- *Quiet*

Subcycles are now available in many sizes to meet the requirements of all size exchanges including P.B.X. service. Pulsators are also available.

We carry Subcycles in stock for immediate shipment to you. Write for further information.

BUCKEYE
TELEPHONE & SUPPLY CO.
COLUMBUS, OHIO

Officers of Northeastern Iowa Telephone Group (Left to Right): FLOYD HOBBS, vice president; CLIFF PEARCE, president; M. I. THOMPSON, secretary-treasurer and H. J. HOPKINS, director. A. G. ADDIE, who was elected a director, does not appear in the photograph.

we offered was superior to that offered by Jim Jones down the street. Do you think when a new subscriber wanted service we would still be able to go out and install a 1910 model telephone instrument in the subscriber's residence when Jim Jones down the street is installing 1946 handsets?

"For many years we have stuck to the old wall type telephone sets. It has been a practical instrument and quite trouble free. The farmer has accepted it because he was offered nothing else. Some telephone men think the farmer doesn't want anything other than the old wall telephone just because he is a farmer. That is not true, for he drives the same automobile as his city friends, the wife has the same refrigerator and other appliances. It is up to you and me to provide them with the same type handset telephone service as the people who live in the cities."

Mr. Pearce closed his discussion by stating that the telephone company must provide the customers it now has with the best service and the latest type of equipment at the earliest possible date.

Other speakers on the program were: M. R. Thompson of the Central Iowa Telephone Co., Cedar Rapids, who discussed various commercial forms used by his company; A. C. Ruble of the Iowa State Tax Commission and his assistant, Jack Pinta, who gave some interesting history of the growth of the condition that now exists with farmer-switched lines and the very small mutual companies, and C. A. Johnson, a cableman from the Northwestern Bell Telephone Co., Des Moines, who presented valuable information on the subject of telephone cables.

Another highlight of the meeting was the operators' school which was conducted at the meeting with C. A. Bowlsby, traffic manager of the Northwestern Bell in charge. Mr. Bowlsby was assisted by Mrs. Oliver Reeves, chief operator of the Lafayette-Warren Telephone Co., Waverly.

The following officers and directors were elected for the coming year: President, Mr. Pearce; vice president, Floyd Hobbs, manager of the Butler-Bremer Mutual Telephone Co., Plainfield; secretary-treasurer, M. I. Thompson, manager of the Dumont (Iowa) Telephone Co.; directors, H. J. Hopkins, manager of the Farmers Mutual Telephone Co., Jesup, and A. G. Addie, manager and plant superintendent of the Northern Iowa Telephone Co., Cresco.

V V

J. R. Porter Honored By Carolina T&T

John R. Porter, chairman of the board of the Carolina Telephone & Telegraph Co., Tarboro, N. C., was presented with a 45-year service pin at a recent meeting of the board of directors. At this meeting, he was eulogized by a number of the members of the board, many of whom have served with Mr. Porter for the past 20 years. He also was lauded for the able manner in which he administered the affairs of the company during this period.

He again was honored when 50 friends surprised him with a party which was held at the community house in Tarboro on December 8, to celebrate his 65th birthday.

Mr. Porter is a past president of the United States Independent Telephone Association.

V V

Shell-Scarred Saipan Has Telephone System

Saipan, one of the most shell-scarred and bomb-blasted island battle areas in the Pacific, has been built up communication-wise by the Army and Navy beyond imagination, considering its 46 square mile area. Its telephone service utilized 1,300,455 ft. of cable and 150 miles of submarine cable.

In addition to the Army and Navy military communications radio stations, Saipan has two broadcasting stations, one operated by the Office of War Information and the other by the Armed Forces Radio Service.

REPLACING EQUIPMENT? SPECIFY..

Raytheon RectiFilteRs

TELEPHONE DC POWER
DIRECT FROM AC.
NO BATTERIES
NO SERVICE
LONG LIFE

INDEPENDENT telephone companies all over the country are ending their power problems, improving service and cutting operating expense by replacing storage batteries with Raytheon RectiFilteRs.

The RectiFilteR is essentially a dry disc rectifier with associated components and a Raytheon control circuit. Together they provide a highly efficient and time-tested method of supplying continuous stabilized DC voltage direct from an AC source. The RectiFilteR eliminates and outlasts many batteries, releases wires for telephone service. And since the RectiFilteR is a magnetic automatic unit it requires neither adjustment nor maintenance.

RectiFilteR Bulletin DL48-156H tells the story. Write today.

RAYTHEON
MANUFACTURING COMPANY
WALTHAM 54, MASS.

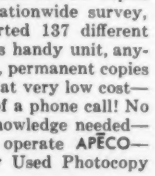
ELECTRICAL EQUIPMENT DIVISION
Excellence in Electronics

Now! Get COPIES of ANYTHING —in a Jiffy!

...Right in your own office! New, error-proof method saves time, typing, hand-copying, drafting and checking!

BLUE PRINTS, PENCIL SKETCHES, LETTERS, SPECIFICATIONS, TRACINGS, WIRING DIAGRAMS, GRAPHS, CHARTS (over 100 others)

Here's a way to expedite work in every department of your business: Use quick, accurate APECO photocopies to circulate important data, to prevent costly errors, and to safeguard valuable originals. Yes, with APECO you can now have all the copies you want—when you need them! APECO copies anything! In a recent nationwide survey, business executives reported 137 different uses for APECO. With this handy unit, anyone can turn out accurate, permanent copies at 1-a-minute speed, and at very low cost—even less than the price of a phone call! No darkroom or technical knowledge needed—even a boy or girl can operate APECO—"America's Most Widely Used Photocopy Equipment." Get full information, TODAY!



MAIL COUPON NOW for this FREE book

AMERICAN PHOTOCOPY EQUIPMENT CO.,
2849 N. Clark St., Dept. EE16
Chicago 14, Ill.

Send me, without obligation, your 20-page, fully illustrated book showing the "what" and "how" of Photocopying and the savings it makes in time, money and labor.

NAME.....
COMPANY.....
TITLE.....
ADDRESS.....
CITY.....STATE .....

Toll Dialing

(Concluded from page 16)

the General Toll Switching Plan. These switching points, together with about 175 additional toll centers, making about 325 in all, have been selected for operating purposes as the key points in the toll routing network and designated as Class 1 offices.

Each central office in the country is connected to a toll center, which, if not one of the 325 Class 1 toll centers, has direct circuits to one of them. The 325 Class 1 toll centers either have direct circuits to the others or know the first intermediate point to reach in the direction of the called place. Therefore, all an operator needs to know to route a call is the toll center serving the called community and the Class 1 toll center through which its inward and outward traffic is routed. (Approximately 80 per cent of all calls are completed over direct circuits and no routing information is required. Of the remainder, about 17 per cent are one-switch and 3 per cent are multi-switch.)

Under the present method of operation, when a customer in Gettysburg places a long distance call to Fresno, the Gettysburg operator goes to the routing instructions and finds that Fresno is a toll center and that Los Angeles is its Class 1 office. The Gettysburg operator reaches Baltimore, which is its Class 1 office, and says to the Baltimore through operator, "Fresno, Calif., via Los Angeles." Baltimore says, "I will give you Pittsburgh," if this is its route to Los Angeles. Reaching Pittsburgh, the Gettysburg operator again asks for Fresno via Los Angeles. Since Pittsburgh has direct circuits to Los Angeles, the next office answering will be Los Angeles, and the Gettysburg operator will then ask for Fresno, and when Fresno answers will give the operator there the called number.

If the circuits from Baltimore to Pittsburgh are busy, an alternate route will be used, the Baltimore operator saying, "I will give you Cleveland," and the advancement of the call will follow the procedure already outlined.

Operator Toll Dialing Method

In order to have the necessary switches made at intermediate points under the nationwide operator toll dialing plan, the operator needs to know only the area and central office codes. Since Fresno is a five-digit city, the national toll code would be, for example, 514 for the numbering plan area and 37, which is FR on the dial, added

Answers to Traffic Questions on Page 25

(1) In clearing a circuit, if the office at which the connection terminates challenges, say, "Clear this circuit," and after receiving acknowledgement, ring again and clear the circuit in the usual way. If an intermediate operator other than the first challenges, pass the clearance order to her and after receiving acknowledgment, again clear the circuit as above unless you are certain that there is but one intermediate switch, in which case, ring on the circuit and then release it. If you are to repeat the verbal clearance, when the operator at the first intermediate office challenges, say, "Clear to (office to which clearance was passed)," and release the circuit as soon as acknowledgment is received.

(2) The circuit is held 15 minutes. If no report is received from the distant office at the expiration of this period, reach the distant operator, say, "AG," and wait for a report.

If you are told to clear the circuit and to AG in a specified interval of time, use the original precedence time if you again encounter a delay when you make the subsequent attempt.

(3) Please refer to the preface for the answer.

(4) The rate to the toll station is used.

(5) Use your judgment as to when to make the next attempt. For example, add two hours to the time the report was received following reports U today, UD, NRG (party not paged), or NRG CF, or use 2:00 p. m. following a report of U afternoon received during morning hours, 7:00 p. m. following a report of U evening received during day hours, or 9:00 a. m. following a report of U (or UD) tomorrow (or given day) or UX. If the attempt time would fall within night hours or on a Sunday or holiday, consult your supervisor before making any subsequent attempt time entry.

to the five digits of the listed number, making 10 in all.

Assuming, for illustrative purposes, that the future routing would be the same, the Gettysburg operator would take up a circuit to Baltimore, and dial the 10 digits into sender equipment located at Baltimore, a control switching point. Baltimore, Pittsburgh, Los Angeles and Cleveland will be control switching points which might be used in the completion of this call. The equipment at Baltimore would translate the national toll code and determine that the first route is via Pittsburgh. It would select a Pittsburgh circuit, if one were available, and would send along the entire 10 digits dialed by the Gettysburg operator. (Incidentally, the pulsing system used between control switching points will be much faster than the step-by-step pulses generated by the operator's dial.)

At Pittsburgh the equipment would select a Los Angeles circuit but would send forward only the Fresno central office code and telephone number, assuming Fresno is in the same numbering plan area with Los Angeles. If the Baltimore-Pittsburgh circuits were all busy, the equipment at Baltimore automatically would try the alternate route through Cleveland and the Cleveland equipment would advance the call to Los Angeles.

At Los Angeles—if that were the last control switching point—the equipment would select a circuit to Fresno and would convert the pulses received from Pittsburgh or Cleveland to the correct number of step-by-step digits and send them out over the circuit to control selection of the called subscriber's telephone at Fresno. If Fresno itself becomes a control switching point this conversion to step-by-step pulses would occur there.

If the call were for a telephone served by an office tributary to Fresno, the operator at Gettysburg would dial 10 digits as on the call to Fresno, but, of course, with a different office code. When the call reached Los Angeles, the equipment there would recognize from the office code that the call was for a tributary of Fresno and would prefix to the called number sent out over the Fresno circuit the necessary digits to perform the switching operation in Fresno. If Fresno were a control switching point, the Los Angeles equipment would send forward only the complete code it had received.

CONCLUSION

While complicated central office mechanisms are required at "control switching points" to make operator toll dialing possible, it is apparent that from the operating standpoint this

STROMBERG-CARLSON
Recommends...

COVERING THE GLOBE WITH ARMSTRONG'S
"Whitall Tatum" GLASS INSULATORS

From the tropics to the northlands, Armstrong's "Whitall Tatum" glass insulators are giving trouble-free service. Meeting all A.S.A. and E.E.I. standards, they defy severe temperature changes.

Automatic machinery plus precise laboratory control guarantees uniformly high electrical and physical properties. Batch materials are rigidly checked. Ring-section studies assure uniformity of the glass while polariscope examinations certify that annealing has cancelled internal stresses and strains.

Crystal clarity of the glass reduces malicious breakage to a minimum. Careful gaging of the pin cavity results in a true, snug pin fit.

For samples and full information, write:

HIGHER SUSTAINED VOLTAGE

LONGER LIFE

ROCK-BOTTOM ECONOMY

These qualities — more important now than ever before — are assured through the constant supervision of America's largest dry battery laboratory.

Made by the makers of "Eveready" "Air Cell" Operators' Transmitter Batteries.

STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U.S.A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

THE LINE IS BUSY!
We mean the Production Line at our Plant where every effort is being made to supply the demand for this masterpiece of seating comfort.
MODEL 2451
The operator's choice. One of two models. Adjustable in height. Rolled steel construction. Comfort speeds communication.
CRAMER Posture
Airflow
CHAIR COMPANY
1205 CHARLOTTE STREET • KANSAS CITY 6, MO.

Murdock

PUSH BUTTONS

Modern design and trouble-free operation are the leading features of these sturdy Push Buttons.

Model No. 10

- Beautifully finished black or walnut bakelite with new, improved positive spring contacts. All metal parts are rustproof and insulated. Years of service. 1⅝" x 1⅛" x ⅞" high.

Name Plate Combination—Model No. 11

- Same construction as No. 10. Black or walnut bakelite with metal escutcheon to hold name card. 3¼"x1⅛"x ⅞" high.

Write for Catalogue

WM. J. MURDOCK CO.
222 Carter St., Chelsea 50, Mass.

method of handling long distance calls is simple. Its advantages have been implied throughout this discussion; they may be summarized briefly thus—

(1) By 1940, average speed of service on all Bell System long distance calls had been brought down to 1.4 minutes, with an average of about three minutes on multi-switch calls. With toll dialing, the speed on multi-switch calls is expected to be close to that of direct-circuit traffic and the average speed about one minute.

(2) The service will be more accurate and less subject to interruptions and cut-offs.

(3) The service will be more uniform and dependable, since fast inward and through service will be available 24 hours a day to the full extent of available facilities. The value of this in peaks of traffic and in emergencies during off-hours is apparent.

(4) Fast switching will reduce holding time, and automatic alternate routing will make more routes and circuits available for a given call, thus tending to make more efficient use of the toll circuit layout.

(5) There will be substantial operating and equipment advantages.

(6) The plan is flexible in application so that it need not affect the time of conversion of an Independent office to local dial, and when this conversion is made, provision for dial handling of toll calls can be included or omitted, as seems preferable to the owner at the time.

The provision of operator toll dialing has an important place in the post-war plans of the Bell System. It will bring to the country's telephone users a faster, more efficient, more dependable — and, therefore, more useful — long distance service. Much work will have to be done in the years immediately ahead; but accumulated experience and the present toll plant together provide a sure foundation on which to build.

(To Be Continued)

V V

Blake Becomes President Of California Pioneers

In the election recently held by mail, George S. Blake of the Associated Telephone Co., Ltd., Santa Monica, Calif., was elected to succeed William DeCarteret as president of the California Chapter of the Independent Pioneer Telephone Association to serve during the 1945-46 term.

Arthur B. Fry, who retired May 31, 1945, after 46 years of service with the California Railroad Commission, was elected vice president, and Grant Smith of the Associated company was retained for a third term as secretary-treasurer.

Those elected to serve on the executive committee are Richard D. Crowe, manager of the Dos Palos (Calif.) Telephone Co.; Orrin Gallup, manager of the Consolidated Telephone Co., Whittier; Edward Wedekind, manager of the Oxnard (Calif.) Home Telephone Co., and J. F. McClurg of Graybar Electrical Co., Los Angeles.

According to President Blake, plans are now being made for the annual convention dinner-dance which is expected to be held next June in Santa Monica. Although the conventions have not been held during the war years, the dinner-dances which conclude both the Pioneer and California Independent Telephone Association conventions formerly attracted approximately 500 members and guests.

V V

Telephones Serve the President

From the President of the United States' special train telephone conversations can be held with any point in the world where telephone or radio-telephone facilities are available.

V V

New York City Telephones Reach Two Million Mark

The New York (N.Y.) Telephone Co. installed its 2,000,000th telephone in the city on December 31. That brings the total 800,000 higher than the number in use in Chicago, the country's second largest city.

New York reached its first 1,000,000 telephones in 1922 and the 1,500,000 mark in 1926.

V V

Research Bureau Publishes Business Information Sources

The National Research Bureau, Inc., Chicago, Ill., is making available to business executives a new type of encyclopedia.

Prepared specifically as an aid to executives in locating business information sources quickly, the Encyclopedia of Business Information Sources contains over 7,000 listings of basic information sources, organized under 222 classifications. The research project covers every important phase of industry, government, agriculture and commerce. The encyclopedia contains over 100 pages of government information. All leading trade associations, trade publications, business directories and hand books are listed under their proper business classifications.

The project has been in development for the past 4½ years under the direction of W. C. Hanson, business consultant, formerly with the market analysis department of Curtiss Wright Corp.

The encyclopedia comes in two volumes, loose-leaf. It is master-indexed and is arranged under 24 major classifications.

Rochester, N. Y., Telephone Corp. Makes Organization Changes

Promotions of men in three top positions of the Rochester (N. Y.) Telephone Corp. were announced December 28.

John P. Boylan, who since 1927 has been president of the corporation, was elected chairman of the board of directors. John W. Morrison, vice president and chief engineer, was elected president. G. William Miller, equipment engineer, was appointed chief engineer. The changes became effective on January 1.

Since coming to Rochester in 1921 from Plattsburg, Mr. Boylan has seen the company more than double its subscriber list and expand from a $6,000,000 to a $26,000,000 corporation. He is

JOHN P. BOYLAN

a past president of the United States Independent Telephone Association, and the New York State Telephone Association and is a director of the Rochester Gas & Electric Corp. and Lincoln Rochester Trust Co.

Mr. Morrison, a native of St. Louis, Mo., went to work for the former Rochester Telephone Co. in 1906 as an engineer and when that company and the New York Telephone Co. were consolidated in 1921, he was appointed chief engineer of the newly formed Rochester Telephone Corp. In March, 1935, he was elected a vice president of the corporation. He is a former president of the Rochester Engineering Society and a member of the American Institute of Electrical Engineers.

Mr. Miller, a Cornell University graduate, joined the corporation in 1925 as a student engineer. He was promoted to engineer in 1935 and on May 1, 1945, was appointed equipment engineer. From November, 1942, until February, 1944, Mr. Miller was loaned by the corporation to the War Production Board in Washington, D.C., to assist in the war work of the communications division.

JOHN W. MORRISON

The Rochester *Democrat and Chronicle* commented on the promotions in the following editorial:

"Changes in officer personnel of the Rochester Telephone Corp. are of broad community interest. Termination of John P. Boylan's active career as president is an occasion for comment on his service not only in bringing the telephone corporation up to its present state of efficiency and planning the major improvements recently announced, but for comment also on his service to the community as president of the Chamber of Commerce and in other civic groups where his good judgment, fine character and inspiring personality made contributions of vital importance.

"Happily, his services will not be lost either to the corporation in its new developments or to the community, since he will remain as chairman of the corporation's board.

"Mr. Morrison, who succeeds him as president, also is well known in civic and professional groups as well as to those closely associated with the corporation. His rise in responsibility has been well earned and well justified. Many technical changes in telephone methods and equipment have taken place since he began with the old Rochester Telephone Co. in 1906. He has kept abreast of these and we suspect has contributed to many of them. Under him the corporation may be expected to continue the spirit and substance of good service it developed under Mr. Boylan's leadership.

V V

BERN LOONEY, SR., superintendent of the Southeast Missouri Telephone Co. properties in Jackson and vicinity, will retire January 31, after 40 years of continuous service.

ACORN
INSULATED WIRE
A I W Co.
If you have a tough assignment for DROP WIRE—TRY ACORN
Increased facilities enables us to handle your limited essential requirements now.
ACORN INSULATED WIRE COMPANY, INC.
225 King Street, Brooklyn, N. Y.
LEICH SALES CORP., 427 W. Randolph St., Chicago
LINDSAY SUPPLY CO., 4815 Superior Ave., Cleveland

We Make More

Different

Better

Reasonably Priced

TELEPHONE

DIRECTORIES

than any other printer

R. R. Donnelley & Sons

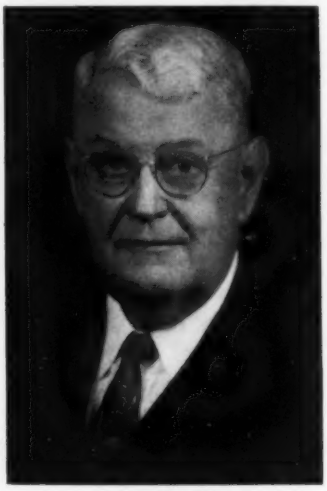
Company

350 E. 22nd St., Chicago

A. L. Edmondson Retired By Southwestern Bell

A. L. Edmondson, for the last 17 years division commercial superintendent for the Southwestern Bell Telephone Co., Houston, Tex., retired under the company's retirement plan on January 1, after having completed 45 years of service in the telephone industry.

Mr. Edmondson, a native Texan who is affectionately known as "Andy" to hundreds of friends all over Texas and



A. L. EDMONDSON

in other states, began his telephone career in 1901 as a lineman in Valley Mills, Tex.

During the following years he became in succession district plant chief at Fort Smith, Ark.; special agent in Little Rock, Ark.; manager at Hot Springs, Ark.; district manager at Pine Bluff, Ark., and connecting company agent for Arkansas at Little Rock.

In 1924 he became district manager at East St. Louis, Ill., and two years later went to Kansas City, Mo., as division commercial superintendent. In 1927 he became general manager of the Texas Telephone Co. with headquarters at Waco, holding that position until 1929, when he was made division commercial superintendent of the Southwestern Bell at Houston.

V V

Overseas Calls Set Record On Christmas Eve

The American Telephone & Telegraph Co. recently announced that all records for long distance and overseas calls from the United States were broken on Christmas eve.

Long distance calls were 21 per cent greater than in any previous Christmas eve or day, a company spokesman said.

The greatest number of calls in any major city were placed from Cincinnati. There the calls were 45 per cent greater than last year.

Overseas calls were 88 per cent greater than in Christmas of 1944.

Because of the packed wires, thousands of calls took hours to place December 25. The worst line in this respect was from Seattle to Cleveland, where the delay was 19 hours.

V V

Radio-Telephone Service to Two German Cities

Frankfurt and Munich were the first points in the American Zone of Occupation in Germany to be linked to the United States by radio-telephone when service was opened January 10, according to the American Telephone & Telegraph Co. Service with Heidelberg, Nuernberg, Bremen, Kassel, Stuttgart and Berlin will be opened shortly.

All calls must be filed in and placed from Germany and are limited to military personnel, as regular telephone facilities in the country have been damaged by the war. It is impossible to complete calls placed in this country to GI's in Germany. The overseas calls are restricted to three minutes and subject to the regulations of the theatre command, and are handled at a single center in each German city served. The cost of a three-minute conversation between any point in the United States and either German city is $12.

Test-O-Lite

TESTS ANY VOLTAGE . . .
100 to 550 Volts, A.C. or D.C.
Safely, Swiftly, Surely

THE NEON GLOW
LOCATES TROUBLE INSTANTLY

Indicates hot or grounded wires. Tells AC from DC. Far superior to ordinary clumsy test bulb. Indispensable in shop or home. The only pocket-size tester with PATENTED SAFETY FEATURE.

Life-time guarantee. List $1.50. Purchase thru electrical dealers. Pat. No. 1,778,883.

RTC-2 VINCENT RARE GAS RELAY

for harmonic or coded bells. Dual purpose device which economically improves both ringing and transmission on party lines. NO MOVING PARTS. Fully guaranteed. Can be installed in a minute.

L. S. BRACH Mfg. Corp.
55-63 Dickerson St. Newark, N. J.

Whatever the Type of Jack, Simplex is Safest

Simplex Jacks are the safest made, the easiest to operate, and the most complete line — lever, screw, hydraulic.

Simplex
LEVER SCREW - HYDRAULIC
Jacks

Templeton, Kenly & Co.
Chicago (44), Illinois
Better, Safer Jacks Since 1899

Naylor Leaves Associated Telephone Co.

Terminating 4½ years of service in various administrative departments of the Associated Telephone Co., Ltd., at Santa Monica, Calif., Vice President J. T. Naylor has announced his resignation, effective December 31, to become

J. T. NAYLOR

vice president and general manager of the Sunland-Tujunga Telephone Co., Tujunga.

Prior to going to the Associated company in June, 1941, as assistant to Ernest Irwin, then general agent, Mr. Naylor had served as an engineer in the telephone and telegraph division of the Public Utilities Commissioner of Oregon. Later he became assistant to President C. F. Mason and for the past year has served in the position of vice president.

He is an electrical engineering graduate of Oregon State College and is a registered professional engineer accredited by the National Council of State Board of Engineering Examiners.

V V

OBITUARIES

JOB B. TURNER, former head of the Hindman (Ky.) Telephone Co., died at his home in Lexington, Ky., January 4 following an illness of several days. Mr. Turner organized the Hindman company nearly 30 years ago. The company was the first telephone system organized in Hindman where it supplied service to the small number of business places in the town and served many miles of lines into nearly every section of Knott County. Mr. Turner sold his interests in the company a few years ago when he located in Lexington.

* * *

ENSIGN ED DE BAGGETT, 22, former employe of the Lexington (Ky.) Telephone Co. was recently reported killed in a plane crash near Monterrey, N. M. Ensign De Baggett had been in the service about a year. He was widely known in Lexington and central Kentucky and had been with the telephone company a number of years before he was inducted into the service.

* * *

H. NELLIS KRAFT, a director of the Lexington (Ky.) Telephone Co. and one of its first organizers many years ago died January 1 at his home in Lexington after a few days illness. He was well known in the telephone industry throughout Kentucky and the South.

V V

Legion of Merit Award Goes To Major Luichinger

Maj. Martin J. Luichinger, former plant superintendent of the Indiana Bell Telephone Co. in Fort Wayne, now of Indianapolis, recently was awarded the Legion of Merit by the War Department.

The award was given for meritorious achievement in the development of a "vitally important" world-wide, secret radio-telephone system. This system, installed and operated under the direction of Major Luichinger "made possible absolutely secret telephone contact between the War Department headquarters in Washington and all strategic headquarters in both the European and Asiatic zones of operation."

The citation also covered the activities of Major Luichinger, in utilizing existing signal corps radio facilities for the development of world-wide radio program transmission networks, furnishing direct contact to commercial broadcasting networks in the United States for spot broadcast of all invasion operations and the news associated with other battle front events.

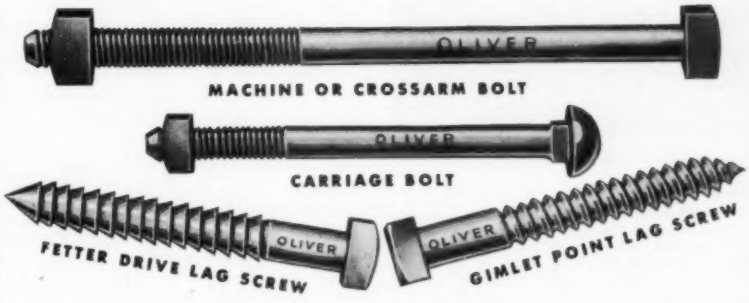
V V

Bowes Named Patent Attorney At Stromberg-Carlson

Frederic C. Young, vice president in charge of engineering and research of the Stromberg-Carlson Co., Rochester, N. Y., recently announced the appointment of Theodore L. Bowes as a patent attorney for the division. Mr. Bowes will work under the general direction of D. Clyde Jones, head of the company's patent department, Mr. Young said.

Mr. Bowes brings to his new position an extensive background in both engineering and the practice of patent law. He began work in the testing department of General Electric Co. shortly after his graduation from the University of Illinois in 1930 with the degree

OLIVER BOLTS



Included in the complete line of Oliver Pole Line Materials are BOLTS of all types and sizes required for telephone service. A few representative types are illustrated above. For complete details see the Oliver Pole Line Material Catalog.

SPEED POINT... a feature of Oliver Bolts that means faster assembly, fewer damaged bolts.

OLIVER IRON AND STEEL CORPORATION

South Tenth and Muriel Streets, Pittsburgh 3, Pa.

of bachelor of science in electrical engineering. In 1934, he was made a member of General Electric's patent department located in Washington, D. C., where a short time later, he earned his law degree from George Washington University.

During World War II, Mr. Bowes was employed at General Electric's Schenectady, N. Y., plant as a radar project manager, while continuing his work with the patent department.

V V

Philco Corp. Changes Name Of Subsidiary Company

The board of directors of Philco Corp. has changed the name of Philco Radio & Television Corp., a wholly-owned subsidiary which handles the national distribution of Philco products in the United States, to Philco Products Inc., it was recently announced by John Ballantyne, president.

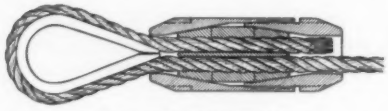
"The greatly expanded scope of Philco operations, which now include household refrigerators, freezers, air conditioners, and radar equipment, as well as radio receivers and television, makes it advisable to give a broader name to our sales company," Mr. Ballantyne said in explaining the action of the board of directors. "It is believed that Philco Products Inc. is a much more appropriate name for this company, which will continue to be a wholly-owned subsidiary of Philco Corp."

V V

Nunn Manufacturing Co. Has New Wire Rope Clamp

A new wire clamp called "Cabl-ox" has been developed by the Nunn Manufacturing Co., Evanston, Ill., as the answer to the old problem of securing wire rope in its many applications.

The "Cabl-ox" clamp, which was engineered by the company research staff and then tested by leading industrial laboratories, incorporates a new



NEW WIRE ROPE CLAMP

and exclusive wedging action in its component parts. This feature makes it possible for the clamp to hold loads in excess of the tensile strength of the rope used. The unit is alloy steel, cadmium plated for weather protection, streamlined for neat appearance and freedom from obstruction. It is claimed that "Cabl-ox" is assembled easily by unskilled labor and may be disassembled readily for the tightening of stretched lines or other uses. It is made in all standard sizes from $\frac{1}{16}$ in. to $\frac{3}{4}$ in. Illustrated color folders describing the product are available upon request from the manufacturer.

dependable
Cedar Poles
MICHIGAN POLE & TIE CO.
NEWBERRY—GRAND RAPIDS
MICHIGAN

ATLANTIC
Creosoting Co., Inc., 17 Battery Pl., N. Y. C.
Creosoted Pine Poles
Crossarms . . Conduit
PLANTS AND OFFICES:
New Orleans, La. Jackson, Tenn. Boston, Mass.
Winnfield, La. Louisville, Miss. New York, N. Y.
Norfolk, Va. Savannah, Ga. Philadelphia, Pa.
Annapolis, Md. Chicago, Ill.

Cedar Poles
MAC GILLIS & GIBBS COMPANY
Wells Bldg., Milwaukee 2, Wis.
★ ★
Northern White and Western Red
Cedar Poles—Plain or Butt-Treated

POLES

B. J. Carney & Co., 100 N. 7th St., Minneapolis, Minn.—Western red cedar poles. Pentrex Butt Treated or Plain.

C. M. Christiansen Co., Phelps, Wis.—Northern White Cedar Poles, plain or butt treated.

International Creosoting and Construction Co., Galveston, Texas.—Creosoted Southern Yellow Pine Poles. Plants: Beaumont and Texarkana, Texas.

T. M. Partridge Lumber Co., Minneapolis, Minn.—Northern White—Western Red Cedar Poles. Plain or butt-treated.

Pensacola Creosoting Company, Pensacola, Fla.—Creosoted Southern Pine. Poles of Superior Long Leaf Quality.

TELEPHONE DIRECTORY ADVERTISING
L. M. BERRY & CO.
Write or Telephone for Proposition
TELEPHONE L.D. 16
TELEPHONE BLDG., DAYTON, OHIO

THE AMERICAN APPRAISAL COMPANY
INVESTIGATIONS • VALUATIONS
REPORTS
CHICAGO • MILWAUKEE • NEW YORK
WASHINGTON • And Other Principal Cities

UNDERGROUND CONTRACTOR
TILE CONDUIT WORK—MANHOLES
BURIED CABLE TRENCH
SEYMOUR CORLEY
220 N. FRINK PEORIA 5, ILL.

Frank F. Fowle & Co.
Electrical and Mechanical
ENGINEERS
35 East Wacker Drive CHICAGO

ACCOUNTING
HERDRICH, BOGGS and CO.
Certified Public Accountants
803 Electric Building
INDIANAPOLIS 4, IND.

SLOAN & COOK
CONSULTING ENGINEERS
120 SOUTH LA SALLE STREET
CHICAGO
Appraisals—Original Cost Studies
Depreciation, Financial, and Other
Investigations

MANFRED K. TOEPPEN
Engineer
Consultation • Investigation
Reports
261 Broadway, New York 7, N. Y.

INSPECTION SERVICE
For poles, crossarms, and other timber products. Preservative treatments of timber products. Analyses of wood preservatives.
A. W. WILLIAMS INSPECTION COMPANY
Main office and laboratories: Mobile, Ala.
Branch offices: New York and St. Louis.
Inspections handled at timber treating plants.

J. G. WRAY & CO.
Consultants
Plant—Engineering—Traffic
Fundamental Plans
Equipment Type Studies
Valuations and Analyses
for Rate Adjustments
Original Cost
Continuing Property Records
231 S. La Salle St., Chicago
Tel. State 9556

KEEP YOUR BONDS